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ABSTRACT

The overall objective of this project was to produce a guidebook to help vocational educators gain skills in working with handicapped students in regular classrooms. The first step in the project was to assess barriers and identify ways to overcome them. Barriers were classified into the following categories: attitudinal, architectural, work environment, placement, and barriers to curriculum modification. Difficulties within categories were identified by a literature review, an advisory panel, vocational and special educators, and others concerned with handicapped training and placement. The second step of the project was to prepare a guidebook acceptable to the vocational education community. The guidebook which identified and described practical ways to overcome barriers was reviewed and critiqued by an advisory panel and special and vocational educators not previously involved in the project. The guidebook was revised accordingly. Step 3 involved the dissemination of the guidebook through a commercial publishing company. (Appendixes include project abstract, meeting topics, synopsis of current information, forms to list problem areas and resources, sample completed survey form, telephone guide and recording form, prospectus and list of publishers, flyer describing the guidebook, list of interested publishers, and publication contract.) (Author/CSS)

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FINAL REPORT

OVERCOMING BARRIERS TO MAINSTREAMING: A PROBLEM-SOLVING APPROACH

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NATIONAL INSTITUTE OF EDUCATION

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AMERICAN INSTITUTES FOR RESEARCH
PALO ALTO, CALIFORNIA

July 31, 1978

ABSTRACT

Final Report
Overcoming Barriers to Mainstreaming:
A Problem-Solving Approach

Peter R. Dahl
Dewey Lipe

Background of the Problem and Objectives of the Project

Handicapped people and their advocates are increasingly insisting on full participation by the handicapped in the mainstream of American life. In this, they are supported by recent legislation, most especially P.L. 93-112, the Rehabilitation Act Amendments of 1973, and P.L. 94-142, the Education of All Handicapped Children Act of 1975. These laws and the attendant regulations specifically require that handicapped students receive a free appropriate public education in a setting as close as possible to that in which non-handicapped children are taught. This means that more handicapped students will be turning up in regular classrooms, including vocational classrooms.

Vocational educators have, for some time, served handicapped students in regular classrooms. However, the increased magnitude of participation that may be expected will require increased understanding of the needs of handicapped students and a wider range of skills in working with them. The overall objective of this project was to produce a Mainstreaming Guidebook for Vocational Educators to help them gain these skills.

Planning and Design of the Project

The project was designed to be conducted in three main steps:

1. Assess the barriers to mainstreaming as seen by vocational education professionals and identify ways to prevent or overcome these barriers.

2. Prepare a guidebook, acceptable to the vocational education community, that will assist vocational educators in identifying and overcoming local barriers to mainstreaming.

3. Disseminate the guidebook widely in the vocational education community.

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Monitor: Velma Brawner
Project Personnel: Peter Dahl, Project Director; Judith Appleby, Dewey Lipe, Irene Yurash

Activities undertaken to complete each step are described below.

Step 1: Assess Barriers and Identify Ways to Overcome Them. Based on the results of an Advisory Panel meeting and a literature review, we quickly settled on the classification of barriers into the following categories: (1) attitudinal barriers on the part of school staff, parents, non-handicapped students, or the handicapped children themselves; (2) architectural barriers making for difficulty in reaching, entering, or negotiating the school; (3) barriers to curriculum modification resulting from inadequate assessment procedures, from ignorance of techniques for instructing handicapped students, or both; (4) equipment or work environment barriers making for difficulty in using tools, taking readings, adjusting settings, reaching controls, and like activities; and (5) placement barriers leading to difficulty in finding jobs for handicapped graduates.

Specific difficulties within these categories were identified through discussions with the Advisory Panel, a survey of vocational educators, discussions with special educators and others specifically concerned with training and placement of the handicapped, and a literature review. These same sources also provided information about strategies for circumventing the difficulties.

Step 2: Prepare a Guidebook Acceptable to the Vocational Education Community. Discussions with the Advisory Panel indicated quite clearly that the best strategy was to take a practical, "non-researchy" approach, offering workable solutions to realistic problems. Therefore, in drafing the Guidebook, we attempted to identify and describe practical ways to overcome barriers of the types identified in the discussion of Step 1. We included photographs and drawings to illustrate the various strategies for overcoming barriers, as necessary for clarity. This was particularly required in the chapters dealing with architectural and equipment barriers.

The draft Guidebook was reviewed by members of the Advisory Panel as well as by special and vocational educators not previously involved in its preparation. They were asked to indicate important topics that had been missed, technical errors either as regards vocational education or education of the handicapped, and instances in which the discussion was inadequate for want of detail, awkwardness of expression or like reasons. Reviewer criticisms were used to guide revision of the Guidebook.

Step 3: Disseminate the Guidebook Widely in the Vocational Education Community. From the outset, our belief was that dissemination would be most effective if the Guidebook were commercially published. Accordingly, we sent a prospectus to publishers very early in the project to determine which houses might be interested in such a work and to solicit their suggestions as to content and organization. This resulted in a list of eight interested publishers. The Guidebook was eventually placed with Olympus Publishing Company and published in July of 1978.

Execution and Analysis of Results

As described above, the principal result of this project is a Guidebook for vocational educators which provides information about practical techniques for overcoming difficulties that may arise as handicapped students enter

regular vocational programs. The Guidebook contains the following Chapters and Appendices:

Chapter 1.	Entering the Mainstream: How and Why
Chapter 2.	Developing Positive Staff and Students Attitudes Towards Mainstreaming
Chapter 3.	Eliminating Architectural Barriers
Chapter 4.	Assessing the Individual Handicapped Student
Chapter 5.	Modifying the Curriculum
Chapter 6.	Eliminating Equipment and Work Environment Barriers
Chapter 7.	Placing Handicapped Students in Jobs
Chapter 8.	Full Circle
Appendix A.	Handicapping Conditions
Appendix B.	Agencies and Organizations Serving the Handicapped
Appendix C.	A Suggested Guidelines Model for LEA/RLA Use Both in Developing and in Reviewing Individualized Educational Programming as a Process

The Guidebook should be useful to practically any vocational educator interested in the inclusion of handicapped students in a regular program. It would be most useful to people at the school level who work directly with handicapped students.

Interpretation and Implications

As this was not a research study, there are not interpretations of any theoretical moment. The primary implications are for practice. Vocational educators should be able to use the Guidebook to teach handicapped students more effectively. In some instances solutions to problems they are actually facing may be presented. In other cases, they may be able to generalize a solution presented in the Guidebook to the problem they are confronting.

Publications of the Project

Dahl, P. R., Appleby, J. A., and Lipe, D. Mainstreaming guidebook for vocational educators. Salt Lake City, Utah: Olympus Publishing Company, 1978.

Dahl, P. R., and Lipe, D. Final report: Overcoming barriers to mainstreaming, a problem-solving approach. (AIR-FR-60800-7/78.) Palo Alto, California: American Institutes for Research, 1978.

Provision for Utilization of Results

It was initially planned to assure dissemination of the Guidebook* by placing it with a commercial publisher. Olympus Publishing Company accepted the book, and it was published by them in July, 1978. The contract with Olympus calls for the following dissemination efforts on their part, as a minimum:

> The PUBLISHER shall advertise or otherwise promote the WORK through direct mailing to at least 50,000 potentially interested parties, by space advertising in at least four appropriate journals, display it at least one convention during the first year, and in other ways as it may deem appropriate, and shall defray all costs of advertising or other promotion. The PUBLISHER shall establish the list price from time to time as it sees fit, and may allow on any sale or purchase such discount as it deems advisable.

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* Dahl, P. R., Appleby, J. A., and Lipe, D. Mainstreaming guidebook for vocational educators. Salt Lake City, Utah: Olympus Publishing Company, 1978.

FOREWORD

This report describes the preparation of a book designed to help vocational educators more effectively include handicapped students in regular vocational programs. This book, Mainstreaming Guidebook for Vocational Educators, by Peter R. Dahl, Judith A. Appleby, and Dewey Lipe, was published in July, 1978, by Olympus Publishing Company, Salt Lake City, Utah. For convenience, this is referred to as the Guidebook in the body of this report.

We would like to thank the following persons who helped in the conduct of this project: Clarence Becker, Ralph C. Bohn, Ruth Brown, Al Burkhardt, Robert A. Cicchetti, Robert and Dorothy DeBolt, Emogene Driscoll, Helene Flolo, T. E. Freund, Joseph Gensiracusa, George A. Glaeser, John R. Gugerty, Ted Hawthorne, Robert M. Hendricks, Owen Hill, Charles Kokoska, Jerry Kuns, Ronald F. Linari, Kalisankar Mallik, Robert F. Mager, C. Carlyle Norment, Susan Phillips, James Raybourn, Eleanor Reynolds, Loren Schoof, Pearl Stephen, James Stott, Lloyd W. Tindall, Jose Vasquez, James R. Wallace, and Robert A. Weisgerber. Variously, they offered suggestions as to format, layout, and content of the Guidebook; gave us access to photographs and drawings; and provided examples included in the body of the book.

We would also like to thank Ms. Velma Brawner, the BOAE Project Monitor, who offered helpful advice during the course of the project.

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I. THE BACKGROUND OF MAINSTREAMING

Well motivated people can disagree on the best methods for educating handicapped students. A specific issue in this general domain concerns the best place in which to educate students. This issue, of course, really boils down to the best place to educate the individual handicapped student. Few, for example, would maintain that a child with a slight limp should be sent to a special school; equally few would argue for sending a profoundly retarded adolescent to a regular high school, expecting the student to participate in the standard physics or shop math courses. So what then is "mainstreaming"? Are there laws requiring it? What are the implications of mainstreaming for vocational education?

DEFINITION OF MAINSTREAMING

For purposes of conducting this project, we found it convenient to use definition of mainstreaming used by the National Advisory Council on Education Professions Development. According to the council,

> . . . mainstreaming is the counscientious effort to place handicapped children into the least restrictive educational setting which is appropriate to their needs. The primary objective of this process is to provide children with the most appropriate and effective educational experiences which will enable them to become self-reliant adults. Within this objective, it is thought preferable to educate children the least distance away from the mainstream of society. Hence there is a heavy emphasis on movement into the regular classroom whenever possible. (National Advisory Council on Education Professions Development, 1976, p.7)

This definition is consistent with recent legislation pertaining to the education of handicapped children, to be discussed briefly, below. It also clearly specifies the rationale for mainstreaming: to provide education for handicapped students for the purpose of enabling them to become self-reliant adults.

A person who looks at mainstreaming in this way will probably avoid such pitfalls as putting a handicapped student in a classroom without giving the teacher adequate training, materials, or support. Such a person, too, will recognize the foolishness of supposing that a handicapped student will necessarily benefit from being in a regular classroom at all times. Rather, that

person will put the emphasis on finding the best combination of special and regular services based on the individual's needs, interests, and capabilities. That approach is the one we tried to include in the Guidebook.

LEGAL MANDATES RELATED TO EDUCATION IN THE LEAST RESTRICTIVE ENVIRONMENT

There are no laws that use the word "mainstreaming." Rather, the law emphasizes the right of handicapped children to education in the least restrictive environment consistent with the provision of appropriate services. The most important law pertaining to the education of the handicapped, so far as public school personnel are concerned, is the Education of All Handicapped Children Act (P.L. 94-142).* Key sections of the regulations pursuant to the Act are:

LEAST RESTRICTIVE ENVIRONMENT.

§ 121a.550 General.

(a) Each State educational agency shall insure that each public agency establishes and implements procedures which meet the requirements of §§ 121a.550–121a.556.

(b) Each public agency shall insure:

(1) That to the maximum extent appropriate, handicapped children, including children in public or private institutions or other care facilities, are educated with children who are not handicapped, and

(2) That special classes, separate schooling or other removal of handicapped children from the regular educational environment occurs only when the nature or severity of the handicap is such that education in regular classes with the use of supplementary aids and services cannot be achieved satisfactorily.

§ 121a.551 Continuum of alternative placements.

(a) Each public agency shall insure that a continuum of alternative placements is available to meet the needs of handicapped children for special education and related services.

(b) The continuum required under paragraph (a) of this section must:

(1) Include the alternative placements listed in the definition of special education under § 121a.13 of Subpart A (instruction in regular classes, special classes, special schools, home instruction, and instruction in hospitals and institutions), and

(2) Make provision for supplementary services (such as resource room or itinerant instruction) to be provided in conjunction with regular class placement.

*See Weintraub, Abeson, Ballard, and LaVor (1976) for a discussion of many aspects of public policy as it applies to education of the handicapped, including the wide variety of laws that afford educational rights. Martin (1977) provides an excellent discussion of the implications of P.L. 94-142 and Section 504 of The Rehabilitation Act Amendments of 1978 (P.L.93-112); included are discussions of case law pertaining to these acts.

§ 121a.552 Placements.

Each public agency shall insure that:

(a) Each handicapped child's educational placement:

(1) Is determined at least annually,

(2) Is based on his or her individualized education program, and

(3) Is as close as possible to the child's home;

(b) The various alternative placements included under § 121a.551 are available to the extent necessary to implement the individualized education program for each handicapped child;

(c) Unless a handicapped child's individualized education program requires some other arrangement, the child is educated in the school which he or she would attend if not handicapped; and

(d) In selecting the least restrictive environment, consideration is given to any potential harmful effect on the child or on the quality of services which he or she needs.

§ 121a.553 Nonacademic settings.

In providing or arranging for the provision of nonacademic and extracurricular services and activities, including meals, recess periods, and the services and activities set forth in § 121a.306 of Subpart C, each public agency shall insure that each handicapped child participates with nonhandicapped children in those services and activities to the maximum extent appropriate to the needs of that child.

§ 121a.554 Children in public or private institutions.

Each State educational agency shall make arrangements with public and private institutions (such as a memorandum of agreement or special implementation procedures) as may be necessary to insure that § 121a.550 is effectively implemented.

(45 Code of Federal Regulations 121.a)

These provisions clearly call upon educators to provide services in a setting as close as possible to that in which nonhandicapped children are taught.

P.L. 94-142 continues a series of legal activities supporting the claim of handicapped persons to full educational opportunity. Regulations issued pursuant to Section 504 of the Rehabilitation Act Amendments of 1973 make very similar requirements as to educational setting. These regulations state:

§ 84.34 Educational setting.

(a) *Academic setting.* A recipient to which this subpart applies shall educate, or shall provide for the education of, each qualified handicapped person in its jurisdiction with persons who are not handicapped to the maximum extent appropriate to the needs of the handicapped person. A recipient shall place a handicapped person in the regular educational environment operated by the recipient unless it is demonstrated by the recipient that the education of the person in the regular environment with the use of supplementary aids and services cannot be achieved satisfactorily. Whenever a recipient places a person in a setting other than the regular educational environment pursuant to this paragraph, it shall take into account the proximity of the alternate setting to the person's home.

(b) *Nonacademic settings.* In providing or arranging for the provision of nonacademic and extracurricular services and activities, including meals, recess periods, and the services and activities set forth in § 84.37(a) (2), a recipient shall ensure that handicapped persons participate with nonhandicapped persons in such activities and services to the maximum extent appropriate to the needs of the handicapped person in question.

(c) *Comparable facilities.* If a recipient, in compliance with paragraph (a) of this section, operates a facility that is identifiable as being for handicapped persons, the recipient shall ensure that the facility and the services and activities provided therein are comparable to the other facilities, services, and activities of the recipient.

(45 Code of Federal Regulations 84)

These Acts were not the first indication that handicapped children had a right to be included in regular education programs when such an approach was practical. Two landmark cases decided before these laws were passed helped to establish this right. These two cases were the following:

- Pennsylvania Association for Retarded Children v. Commonwealth of Pennsylvania, 334F. Supp. 1275 (E.D. PA1971). After concluding in this case that the Commonwealth had a legal obligation to provide a free public education to retarded persons, the court further ruled:

  "It is the Commonwealth's obligation to place each mentally retarded child in a free, public program of education and training appropriate to the child's capacity, within the context of a presumption that, among the alternative programs of education and training required by statute to be available, placement in a regular public school class is preferable to placement in any other type of program of education and training."

- Mills v. Board of Education, 348F. Supp. 866 (D.D.C.1972). Mills, a twelve year old, was excluded from class as a behavior problem. It was successfully argued that Mills had been denied due process of law when he was removed from class. The court, in upholding the plaintiff in this suit, ruled in favor of the entire class of handicapped people:

  "Not only are plaintiffs and their class denied the publicly supported education to which they are entitled many are suspended or expelled from regular schooling or specialized instruction or reassigned without any prior hearing and are given no periodic review thereafter. Due process of law requires a hearing prior to exclusion, termination or classification into a special program."

Many other suits followed upon the conclusion of these cases. Public Laws 93-112 and 94-142 serve to set standards for placing and serving handicapped students.

IMPLICATIONS FOR VOCATIONAL EDUCATION

Clearly, vocational educators may expect to have increasing numbers of handicapped students in their courses: the laws described above apply as much to vocational programs as to nonvocational programs. Handicapped students have, in fact, succeeded in a wide variety of vocational programs and in a great array of jobs. (See Cook, Dahl, and Gale, 1978, for several hundred examples. Any agency serving handicapped people can also provide a great many instances of achievement.) Thus, the inclusion of the handicapped is not new; it is the magnitude of participation that may be expected to increase.

To serve more handicapped students, vocational educators will almost certainly need increased understanding of the needs of handicapped people and a wider range of skills in working with them. Specifically, vocational staff will need to be able to carry out the following activities either by themselves or in cooperation with other professionals:

- Establish positive attitudes toward the handicapped.
- Assess the architectural accessibility of vocational facilities and determine needed modifications.
- Assess the capabilities and limitations of handicapped students in educationally relevant terms.
- Develop an individual educational program (IEP) on the basis of the assessment.
- Determine what special equipment or equipment and work station modifications are needed in the classroom.
- Place handicapped graduates in jobs.

The Guidebook* prepared as part of this project is intended to help vocational educators gain these skills.

* Dahl, P.R., Appleby, J.A. & Lipe, D. Mainstreaming Guidebook for Vocational Educators. Salt Lake City, Utah: Olympus Publishing Company, 1978.

II. IDENTIFICATION OF BARRIERS TO MAINSTREAMING

Barriers are viewed here as impediments to learning outcomes. In this sense, barriers exist for vocational teachers, administrators, counselors, and placement personnel as well as for the handicapped students because both staff and students are accountable for the attainment of certain educational outcomes. This chapter describes how the most pertinent barriers that vocational education practitioners must overcome were identified. Four major sources of information about barriers were: (1) a carefully selected Advisory Panel, (2) a mail/telephone survey of vocational education practitioners, (3) a review of the literature, and (4) personal contacts.

PROJECT ADVISORY PANEL

The Advisory Panel members were selected for their practical experience and creativity in circumventing barriers to vocational education for handicapped students.

- Ralph Bohn has a long history in industrial arts education and has served on several national advisory panels related to vocational education including vocational education of handicapped students.
- Ruth C. Brown represented the Maryland State Department of Education where she served as a staff specialist in vocational education for handicapped students.
- Emogene Driscoll had conducted a large school district's program for placing handicapped students in vocational classes and for placing high school graduates in jobs or in programs for further training.
- Theodis J. Hawthorne had observed various barriers throughout the State of California as a result of his job in orgainizing workshops to assist vocational educators in developing their programs to serve handicapped students better.
- Robert Hendericks, in addition to his administrative functions, had counseled educationally handicapped and dyslexic students in their vocational education careers.
- Robert Mager's special expertise relevant to this project was his skill in writing imaginative, challenging, and practival guides for professional educators. He did not participate in the Advisory Panel meeting to identify barriers; instead he advised the project staff regarding format and style of the Guidebook.
- Pearl Stephen drew upon her firsthand experience of counseling handicapped students in a regional vocational center.

- Robert Weisgerber, as Director of AIR's Research and Evaluations Application Center for the Handicapped (REACH), had long been involved in the preparation of educational materials and programs for blind, deaf, orthopedically impaired, and mentally handicapped students as well as for instructors and counselors.

The organization and position title of each panel member are presented in Table 1.

The first meeting of the project Advisory Panel was held during the third month of the project and focused exclusively on the task of identifying barriers as perceived by vocational educators, counselors, and placement personnel and on practical means of surmounting those barriers. In order to mobilize the vast store of practical experience of the panelists and to articulate those experiences efficiently with the objectives of this project, the panel members were thoroughly oriented before they arrived for the first panel meeting. That orientation was provided through letter contacts made early in the project and again about two weeks prior to the meeting. In the initial letter and telephone contacts, of course, we were concerned with welcoming panel members and setting a mutually agreeable date for the meeting. From the perspective of the project staff, holding the meeting in the third project month allowed just about the right amount of time for the staff to assemble background resources and identify the most pertinent issues which the panel could help resolve.

The panel members were first sent a project abstract (Appendix A) and a list of meeting topics (Appendix B). The list of topics included: (1) six categories of barriers to mainstreaming, (2) practical methods of overcoming barriers, and (3) vocational programs to include in a survey to identify barriers. The emphasis was not only on identifying practical means of surmounting barriers but also on practical procedures for project staff to use in achieving their objectives. Neither the abstract nor the list of topics was very long and elaborate. Both served primarily to direct the panel members thoughts toward the specific tasks of this project. These initial materials were augmented by a synopsis of current information (Appendix C) which we sent to panel members about a week before the meeting. The synopsis included information regarding barriers and possible programs to contact in the survey. The purposes of sending the synopsis were to stimulate, direct, and reinforce the process of thoughtful preparation for the meeting and to show by implication, where gaps were in materials we then had available.

Table 1

Project Advisory Panel Members

Name	Organization	Position
Ralph C. Bohn	San Jose State University	Dean of Continuing Education
Ruth C. Brown	Maryland State Department of Education	Staff Specialist
Emogene Driscoll	San Jose Unified School District	Vocational Coordinator for the Handicapped
Theodis J. Hawthorne	Division of Special Education California State Department of Education	Special Education Consultant
Robert Hendricks	San Mateo County Regional Occupational Program	Coordinator of Student Services
Robert Mager	Mager Associates, Inc.	Educational Consultant, Writer, Publisher
Pearl Stephen	San Jose Regional Vocational Center	Vice-Principal
Robert A. Weisgerber	American Institutes for Research	Principal Research Scientist

The panel meeting itself was an intensive one-day affair using a variety of approaches to elicit the best, most creative contributions from each member. The first activity was a round-table discussion of each of the three topic areas. This was followed by a period of writing time during which panelists assembled their thoughts in a semi-structured form as shown in Appendices D and E. On the first form, they were given writing space under each of the six categories of barriers and were asked to describe "real-world" problems as the panelists had encountered them. On the second form, they wrote the references for printed resources and names of specific current programs that might be good sources regarding each of the six barrier categories. The last part of the day was devoted to discussing ways of structuring the survey form and also the format of the Guidebook. The two were discussed together so that the form and content of information received from the survey would be compatible with the evolving format of the Guidebook.

The panel meeting was highly successful for several reasons. The members were deeply committed to the goal of producing a high quality, practical, and attractive Guidebook for vocational educators. They brought a rich background of practical experiences from the real-world of vocational education, counseling, and placement of handicapped students. And, they had developed and tested their own creative solutions to many of the barriers they encountered. A sampling of barriers identified by the panel members is given in Table 2.

SURVEY PLAN AND SURVEY INSTRUMENT

The second major source of information about barriers was a survey of vocational education programs across the country. The purpose of the survey was to learn from actual recent experiences of vocational education teachers, administrators, counselors, and placement personnel. Those experiences were intended to serve as case examples to include in the Guidebook.

Numerous sources provided suggestions either of programs to be included in the survey or of other persons who might know of excellect programs. Theodis Hawthorne suggested several programs in California. The publication by the National Association of Vocational Education Special Needs Personnel entitled, 100 Successful Vocational Special Needs Programs, was another source.

Table 2

Sampling of Barriers Identified by the Advisory Panel[a]

I. Attitudes and Skills

a. Not using available skills such as total communication. For example, total communication to a deaf person might include gestures, facial expressions, careful articulation, good verbal facility and vocabulary, written expression, etc.

b. Assumptions that handicapped students are nearly always helpless which may lead to a condescending attitude rather than "try-to-do-it" approach.

c. Fear of accidents caused by or happening to handicapped students.

d. Already overburdened vocational educators who may feel that handicapped students represent yet another problem being dumped on them.

e. Lack of awareness of areas of interdependence between special education teachers and vocational education teachers--lack of organizational structure and guidance for working together.

f. Lack of factual information about specific limitations of a particular handicapped student. This compounds inappropriate attitudes.

g. Fear that other students will not accept the handicapped students.

h. Fear that handicapped students will stigmatize voactional education as "watered down" and lacking in standards.

i. Overoptimism which may lead counselors and teachers to overlook potential difficulties and not prepare for them.

II. Instructional Aids and Equipment Modification

a. Many simple and inexpensive devices are available or can be easily made but are not known to vocational educators.

b. Special services such as recordings for the blind may be easily available but not known to school staff.

c. When new equipment is purchased, opportunities to select models more usable by handicapped students may be passed up.

d. Financial resources to aid in making equipment modifications may not be known to vocational education administrators.

III. Architecture

a. Doorway thresholds over 1/2" high.

b. Electrical outlets at workbenches beyond reach of some handicapped students.

c. Narrow aisles that won't accommodate wheelchairs.

d. Inaccessable restrooms.

IV. Placement

a. Employers' rejection of a handicapped person before learning what the person can do.

b. Lack of prior experience in the simple art of regrouping job duties to fit within the capabilities of a handicapped person.

c. Handicapped students trained for jobs for which there are no openings.

d. Employers who have not been adequately prepared either in attitudes or processes that facilitate the successful placement of handicapped students.

e. Students not taught how to display their capabilities with confidence in a job interview or job try-out.

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[a] This list is intended to sample rather than to represent all barriers suggested by panel members. The full range of barriers is presented in the Guidebook in the context of various means for overcoming them.

We requested suggestions of possible survey sites from professionals in attendance at several conferences and meetings. These included:

- National Conference on Research Management in Vocational Education held in St. Louis
- California State Association, Council for Exceptional Children, meeting in San Francisco
- American Vocational Association annual convention in Houston
- National Advisory Panel meeting for AIR's Vocational Training and Placement of the Severely Handicapped project
- First Annual Conference on Vocational Education for Handicapped held in San Diego

In addition to the above, we telephoned 21 persons who had been involved in the Special Needs Session of the American Vocational Association Convention and asked them to name programs where barriers were being successfully surmounted. These contacts yielded the names of 25 programs that showed promise of providing useful examples.

An article describing this project appeared in the newsletter of AIR's "Vocational Training and Placement of the Severely Handicapped" project and an announcement of the project along with the Project Director's name and address appeared in NEWSNOTES, a publication of the National Association of Vocational Education Special Needs Personnel. Both publications brought numerous responses, some of which developed into sources of innovative examples for the Guidebook.

While potential sources of case examples were being accumulated, a draft survey form was prepared. The form was designed to gather detailed information about the setting, the barrier, who was involved in dealing with the barrier, what they did, what principles emerged from their solution, and what the student outcomes were. The aim of the form was to solicit details rather than generalizations. We wanted to be able to describe each example thoroughly so that other vocational educators who encountered similar concerns would have sufficient information to implement the same or an adapted solution.

Since the form was designed to elicit a thoughtful and thorough response, we prepared an example of a completed form to serve in the survey as a guide to respondents. To obtain an example, project staff visited the San Jose Regional Vocational Center and talked with Jan Nyssen, one of the Food Services

Instructors. He described concerns that developed during the instruction and job placement of a mildly retarded student and related how he had successfully dealt with those concerns. The survey form with this example is presented in Appendix F.

The formal survey was conducted in two steps, three if necessary. First, we telephoned the contact person whose participation was solicited. The Telephone Guide and Recording Form used for this telephone contact is presented in Appendix G. If the contact person agreed to participate, then information was noted about the type of barrier that would be described in the example, the handicapping condition of students involved, and who on the staff would be providing the example. Second, the survey form was mailed and third, a follow-up contact was made if a response had not been received in the agreed upon time period.

The formal survey reaffirmed what we had experienced earlier in the project. There was very great interest in this topic among vocational educators. Many were just getting into mainstream education with a few handicapped students and were preparing to expand their efforts. They had encountered barriers and were in the process of working out solutions. They were very interested to learn what others had done who were encountering similar problems; however, many of them did not feel that their own solutions were yet developed to such an exemplary level as to deserve dissemination and replication. Consequently, of the 25 programs formally surveyed, 10 responded by returning the form with detailed examples. The sources of 10 returned surveys plus the "Example" survey are given in Table 3.

REVIEW OF THE LITERATURE

Much of the relevant literature was already available at AIR and familiar to project staff before this project got underway. The pertinent abstracting systems, included in the DIALOG computerized systems such as ERIC and AIM/ARM, had been searched for literature pertinent to mainstream vocational education of handicapped students. From this repository approximately 30 print sources were identified and reviewed early in the project; later approximately 30 more added to that list. Of these, 39 were referenced in the Guidebook.

Table 3

SURVEY RESPONSES--
SOURCES OF INNOVATIVE APPROACHES TO
SURMOUNTING MAINSTREAMING BARRIERS

- Brainerd Area Vocational Technical Institute
  - One of 31 Area Vocational Schools in Minnesota
  - Example from the Welding Department
  - Allen Burkhart - Special Needs Director

- Blue Hills Regional Technical School
  - One of 23 regional schools of this type in Massachusetts
  - Example of a Comprehensive System of Special Needs Planning
  - Ronald F. Linari - Administrator of Special Services

- Board of Cooperative Education Services of Nassau County
  - Division of Occupational Education
  - Salisbury Center; Westbury, New York
  - Example of ways to foster positive and supportive attitudes
  - Clarence R. Becker, Supervisor

- Community College of Baltimore, Maryland
  - Epilepsy Education Program at Liberty Heights Campus
  - Wendy S. Kitt, Coordinator/Counselor

- Conroe Independent School District, Texas
  - Driver Education for EMR students
  - Carolyn Garrett, Vocational Adjustment Counselor

- Ector County Independent School District; Odessa, Texas
  - Special Education Department - Job Placement
  - Keith A. Dial, Director

- Metropolitan Technical Community College; Omaha, Nebraska
  - Hearing Impaired Program
  - Edward L. Franklin, Counselor

- Regional Occupational Program; Burlingame, California
  - San Mateo County Office of Education
  - Data Entry Program for Deaf Students
  - Bob Hendricks, Director of Student Services

- *San Jose Regional Vocational Center, California
  - Food Service Program--EMR student
  - Jan Nyssen, Instructor

- Technical Center; El Paso, Texas
  - Vocational Education of Handicapped Program
  - Example of building real-life job requirements into the program
  - Owen Hill, Instructor

- Waukesha County Technical Institute, Wisconsin
  - One of 16 postsecondary vocational technical districts in the state
  - Example of a mildly mentally retarded student in auto mechanics and another of a visually handicapped student in electronics servicing
  - Jose F. Vasquez, Specialist - Special Need Students

*This was the completed "example" survey form included in the mail survey to show how the form should be filled out.

These sources furnished a picture of the current state-of-the-art of mainstreaming which proved to be one in which many more barriers had been identified than had been successfully surmounted. These early sources were also useful in establishing the six categories of barriers that proved to be flexible and exhaustive. At this point we branched out in our literature search to equipment catalogs and supply lists, major centers of study of the handicapped across the country, and organizations representing the handicapped. These sources are listed in the Guidebook in the Acknowledgements section, in Appendix B: "Agencies and Organizations Serving the Handicapped," and in the chapter references.

The review of literature seemed to demonstrate that the time was ripe for the preparation for this Guidebook. A great many simple devices, clever means of modifying equipment, and complex machines had been developed and tested but their availability has not been widely publicized. Scattered individuals had achieved success in mainstream vocational education through their own efforts in combination with those of other vocational staff and special education staff. These successes had been reported in equally scattered sources. Recent publications of various research and development centers, organizations serving the handicapped, and vocational and technical schools were pertinent to specific mainstreaming issues. Thus, the Guidebook has served to amalgamate this wide range of practical resources into a single practical reference for firing-line vocational educators.

PERSONAL CONTACTS

One other resource that provided an invaluable array of practical ideas was individuals with whom we communicated personally. Clarence Becker, Supervisor at Salisbury Center (BOCES), New York, made a special trip to AIR while he was traveling on the West Coast. He described for project staff many highly pertinent activities in Nassau County. Robert DeBolt visited AIR and also opened his home to a visit from one of the project staff. The DeBolt family provided many of the key points and practical suggestions presented in the chapter on attitudes in the Guidebook. Joseph Gensiracusa, Principal of San Jose Regional Vocational Center, invited project staff to visit the Center at which time he and several of his staff discussed pertinent activities in detail. Charles Kokoska communicated his ideas to the staff in telephone conversations and written communications.

Jerry Kuns, Susan Phillips, and Loren Schoof of the Sensory Aids Foundation provided many tips for communicating with blind students. James Stott of Gallaudet College gave us excellent suggestions regarding teaching deaf students.

This does not, of course, exhaust the list to personal resources. Rather, it mentions the majority of contributors who are not included or are only briefly mentioned in other sections of this report.

III. WAYS OF OVERCOMING BARRIERS TO MAINSTREAMING

This chapter highlights some of the ways of overcoming six categories of barriers as presented in the Guidebook. The six major headings of this chapter correspond to chapter titles in the Guidebook.

DEVELOPING POSITIVE STAFF AND STUDENT ATTITUDES TOWARD MAINSTREAMING

The attitudes of teachers, parents, and students amalgamate to create a learning environment that may inhibit or very greatly benefit handicapped students. Prevailing attitudes that appear to be most beneficial include: (1) high expectation of performance achievement within the limits of potential capability; (2) much praise for progress toward educational goals; (3) admonition, prodding, and even occasional anger as required to keep the students on target and developing toward their goals; and (4) a sense of humor that is relaxed and spontaneous.

Parents' attitudes are important in the development of life style and outlook on the part of handicapped students and it is helpful to vocational education staff to understand why and how parents' attitudes develop. Negative parental attitudes may have developed from guilt, embarrassment, self-pity, resentment due to extra responsibility placed on them, anger, and so on. It requires exceptional qualities of character on the part of parents to overcome barriers to the personal development of handicapped children in the home. In this sense, the situation in mainstream vocational education is parallel to the situation in the home. Those homes in which handicapped children learn to share family responsibilities, perhaps receive pay for work done beyond the normal responsibilities, and develop their best talents and skills are paving the way for success of those handicapped students in vocational classes and eventually in the work world. Of course, not all homes so prepare their children and in those cases the attitude environment of the school's vocational education classes is all the more important

When handicapped students enter a new vocational education class, it is important to break the ice naturally and smoothly, to deal comfortably with

the student, and to avoid embarrassing and alienating situations, especially at first. A transition period such as orientation classes or individual consultation with the handicapped student and the parents is usually a must. As the student gets involved in the class, the need to protect must be carefully tempered in order to avoid over-protection. The student must be helped to function independently and to take risks within limits.

ELIMINATING ARCHITECTURAL BARRIERS

There are four main areas of vocational facilities that may present barriers to handicapped individuals. These include: (1) getting to the building from the transportation vehicle; (2) entering the exterior doors and passageways; (3) moving about in the building; and (4) using the restrooms, fixtures, and other items in the building. Systematic elimination of critical barriers requires first that the facility be carefully assessed to identify problems that would confront handicapped individuals. Such assessment should be conducted by a team that would include persons knowledgeable regarding barriers, school staff, and persons who know costs and effort required in making changes. For any facility still in the planning stage, an ideal situation, the list of team members would include the architect and the contractor.

In conducting the assessment, human factors of potential importance include the awareness and cooperation of faculty and staff. They should be consulted as the first step in developing an assessment plan. The central feature and the bulk of the assessment plan is the list of questions to be asked when conducting the assessment. During all phases, of course, the regulations issued pursuant to the Rehabilitation Amendments Act of 1973 (P.L. 93-112) regarding program accessibility determine the overall goal as a matter of legal requirement.

Evaluation of accessibility to the facility includes answering questions about the parking lot and passages to the building. The questions concern parking places, curbing, ramps, parking lot surface, and lighting. Assessment of passages to the building includes examination of slope gradients, width of walkways, signs, steps and stairways, and protection from hazards of weather.

Barriers to entering the building may exist in steps, ramps, doors, and doorways. In new building design the most desirable situation for most handicapped persons is for designs that do not call for steps or ramps at all. With regard to existing structures, assessment should include examination of slope, width, surface, and safety features. Doors and doorways are examined for maneuvering room, obstructions, force required in opening, and so on.

Barriers to negotiating the building may exist in travel routes between rooms and also within rooms. Between room travel should be assessed for adequacy of markings such as braille or raised-letter labels for blind students; location of controls, as on elevators; obstructions; and adequacy of warning systems such as fire alarms. Assessment of travel routes within rooms should include consideration of classrooms, shops, auditoria, lunch rooms, and any other public areas that are commonly used by students.

Assessment of barriers to using fixtures, appliances, study areas, and other items integral to the building would include evaluation of work stations, study carrels, and restrooms. Work surfaces, storage areas, and station fixtures would be examined for access and usability. Toilets, basins, drinking fountains, vending machines, and telephones would also be important fixtures to assess.

ASSESSING THE INDIVIDUAL HANDICAPPED STUDENT

Perceptive analysis of a handicapped student's vocational abilities and potential is fundamental to surmounting mainstreaming barriers. Any professional person who has information to contribute or a stake in the outcome may and should contribute to the formal and continuing assessment of a handicapped individual. An initial personal interview with the student helps to establish rapport and to determine the student's aspirations as well as his or her opinion of the vocational program and reasons for enrolling in it. Many other types of information are usually available or can be obtained in order to round out the student's profile.

School records are an excellent source of background information. Of special importance are medical, psychological, educational, and social information.

The possibly vast accumulation of data on a given individual needs to be selectively sampled to contribute to the current picture of the individual. A checklist of capabilities is helpful in choosing the relevant information. Academic skills, interpersonal relationships, personality, and other factors relevant to vocational preparation and future employment are factors of interest.

The picture provided by available background information may need to be filled in and given currency through the use of additional psychometric and basic skills testing and also work sample assessment. Work samples may range from simple classroom procedures to commercial test batteries. In addition to the specific product of a work sample, valuable information may be obtained from systematic observation of attention span, approach to problem solving, grooming, and many other critical behaviors.

The picture resulting from a complete individual assessment, as synthesized in a vocational assessment report, reinforces the notion that a handicapped student is not, primarily, a representative of a "category" such as blind or deaf, but, rather, a "person" who possesses a unique combination of current capabilities, potential achievement, and level of motivation to achieve that potential.

Individual assessment is the foundation of an individual education program (IEP) which is required by law (P.L. 94-112: Education for All Handicapped Children Act of 1975). Parents and teachers have a central role along with other professional persons in preparing an IEP. In addition to assessment information, an IEP includes program information, implementation information such as learning style and behavior strengths, long-range goals, and short-term objectives.

MODIFYING THE CURRICULUM

Since one of the objectives of vocational education for handicapped students is to use regular tools, equipment, and materials whenever possible, the task of curriculum modification is purposefully aimed to do the minimum necessary to enable the student to achieve the educational outcomes designated in the IEP. Where modifications are required they may involve course content, materials,

physical environment, and/or teaching techniques. For example, a deaf student enrolled in the San Mateo (California) Regional Occupational Program required only the preparation of some special diagrams and the use of the intructor's and other students' course notes; elaborate changes or support were not needed.

One area of special concern to vocational teachers is classroom instructional techniques. Some very simple precautions make a big difference to students such as avoiding a window or other back lighting when a deaf student is relying on lip reading. Similarly, other specific techniques help the teacher to communicate with visually impaired students, physically disabled, and mentally retarded students.

Selection of instructional materials appropriate to specific handicapped students is greatly facilitated by a set of standard criteria that takes into consideration a student's learning characteristics, teacher requirements, and characteristics of the materials. Nevertheless, even with the availability of excellent aids and guides for modifying the curriculum, inservice training programs go far toward overcoming reservations about making such modifications. The Wisconsin Vocational Center at the University of Wisconsin - Madison has developed a 12-session course called Curriculum Modification and Perscriptive Teaching for Handicapped Students which serves as an excellent model for such inservice training. The model is highly adaptable to teachers' special interests and to the specific disabilities that may be represented among currently enrolled handicapped students.

ELIMINATING EQUIPMENT AND WORK ENVIRONMENT BARRIERS

The demands placed upon handicapped students by equipment and the work environment may give rise to physical, visual, auditory, speech, or intellectual barriers. There are three general strategies for eliminating such barriers. One is, when buying new equipment, to select pieces that minimize potential barriers such as choosing drafting tables that do not have cross pieces which would obstruct the approach of a wheelchair. The second general strategy is to provide a handicapped student with a tool, device, or aid, such as a magnifier to help a mildly visually impaired student to read instructions or diagrams. The third is to modify the existing equipment, such as moving a switch to within reach of the student.

Just as with architectural barriers discussed earlier, it is necessary to assess the equipment and work environment systematically to identify barriers. This must be done separately for each new handicapped student in the program. The assessment team should include someone familiar with problems encountered by persons with a given handicap. Outside organizations such as Goodwill Industries may provide such a person. Since any changes in equipment might affect others who use the same equipment, it is essential for teachers to be represented on the team. And, certainly the parents and students would know the capabilities and limitations of the student that must be considered and may well have worked out solutions in related situations elsewhere. In conducting the assessment, tentative solutions may be put up for consideration in relation to further information and safety issues that may arise. In many cases, a second meeting of the assessment team should be held for purposes of making final decisions after a period of time has elapsed for contemplation.

PLACING HANDICAPPED STUDENTS IN JOBS

An employer's uneasiness and concern about hiring any new employee will likely be even greater with regard to hiring handicapped individuals. It is the unknown quantities such as employee motivation, commitment to doing a good job, and possible hidden liabilities that trigger reservation and caution in hiring someone new. Employers may fear that the cost of accommodating the handicapped person may be great or that other employees won't be able to work with a handicapped individual.

Most of these concerns can be overcome but to do so requires planning and time. The task is greatly facilitated by a placement team that includes vocational staff familiar with the student to be placed, employers, labor organization representatives, the handicapped student, and representatives of organizations serving the handicapped. Basic steps include starting early by gearing the training program for placement, making employer contacts long before the student graduates, resolving the employer's concerns as you go along, assisting in the actual transition from school to work, and then following up to identify and resolve difficulties on the job before they escalate into major problems.

When gearing training programs for placement, training for on-the-job skills must be supplemented with training in job-seeking skills plus good work habits and social skills involved in dealing with coworkers, supervisors, subordinates, and customers. These related skills can be worked very naturally into the vocational training program by setting goals and standards regarding dress, work habits, social behaviors, and so on and by including these issues in with instruction and evaluation of handicapped students.

Employer contacts remain the key to placement of qualified handicapped students and such contacts are most productive when they are developed prior to discussion about placing a particular handicapped individual. The purpose of the contacts is to learn about the employer's needs and concerns and to begin opening doors for future consideration of specific handicapped individuals for specific jobs. The latter purpose may be served by conducting job analyses of jobs with potential openings so that job requirements may be matched with a handicapped graduate's capabilities.

Employer's concerns need to be dealt with individually; however, this can often be done effectively by demonstrating a student's work capabilities in class. Many accommodations to the student in class would transfer directly or could be easily adapted to the job. Sometimes special arrangements can be worked out for on-the-job training or for a trial period on the job as part of the vocational training program. After a student has been placed, systematic follow up to assure success will be well rewarded by enhancing the possibility of future placements.

IV. GUIDEBOOK DEVELOPMENT

In this section we will discuss the procedures used to make sure the content was presented in an easily used style and format. The early decision to seek a commercial publisher for the Guidebook greatly affected the process of development. For example, we gave scant attention to page design or layout as they affect the reader, since these are mainly publisher concerns. On the other hand, we paid careful attention to those manuscript characteristics that publishers appreciate, such as double spacing, wide margins for editorial marking, and a wealth of side headings.

PRELIMINARY STAGES: DETERMINING APPROACH AND STYLE

The determination of approach and style had two aspects: the overall strategy for content organization, and the method for presenting the content to make it most useful to potential users. We discussed these matters among ourselves and with our Advisory Panel, coming to the following decisions.

Overall Strategy for Content Organization. We decided to organize the content in a way that paralleled as closely as possible that which we would use in a book on "regular" vocational education programming. Thus, chapters included discussions of attitude, student assessment, curriculum planning, facilities, equipment, and placement, giving attention to the special needs of people with various handicapping conditions within each chapter, as necessary. This seemed to be preferable to an organization based on handicapping condition, in that it lends itself to a discussion of what can be done to teach handicapped students using broad topics with which vocational educators are already familiar. Organizing by handicapping condition, on the other hand almost inevitably draws primary attention to limitations rather than possibilities, and is foreign to members of the target audience.

In short, we felt that the organization we chose was at once more optimistic and familiar than the most likely alternative. Advisory Panel members agreed with this assessment.

Method for Presenting the Content. In accord with Advisory Panel suggestions, we tried to make the discussion down to earth and practical, avoiding research jargon and research content. That is, we attempted to give practical suggestions about steps to take in establishing favorable attitudes, modifying a curriculum, working with a sign language translator, modifying equipment, preparing a student for a job interview, and so on. We wrote it essentially as a textbook. We decided not to go into the research background of the study. There is no mention of how the survey was conducted, how the literature was reviewed, or other such matters, which, while important in the context of a report such as this one do not offer much enlightenment to the practitioner faced with a practical problem.

DRAFTING THE GUIDEBOOK

Each of the authors assumed responsibility for drafting those chapters in which he or she had the most interest or greatest competence. The topical organization led to very few instances in which the proper location of a given topic was in doubt. Once these few cases were resolved, schedules set, and basic matters of style determined, the authors worked independently on their respective chapters. Project staff periodically reviewed each other's drafts, making suggestions for content revision, pointing out poorly written passages, and identifying overall gaps in content or overlapping content between chapters.

As drafting progressed, we took special care to secure permission for the use of copyrighted material and releases from persons shown in photographs. Such releases and permissions were, of course, critical as commercial publication was contemplated. We also had high quality line drawings prepared to illustrate architectural modifications. This seemed desirable both to make a favorable impression on potential publishers and to avoid panicked last minute redrawing of rough sketches if we were unable to find a publisher and had to print the required number of copies to submit to the goverment ourselves.

TECHNICAL REVIEW

The draft Guidebook was reviewed by the following people:

- Advisory Panel Members:

Dr. Ralph C. Bohn	Mr. Robert M. Hendricks
Ms. Ruth Brown	Ms. Pearl Stephen
Mr. Ted Hawthorne	Dr. Robert A. Weisgerber

- Other Reviewers in Vocational Education and Special Education:

Clarence Becker, Supervisor
Robert A. Cicchetti
Eleanor Reynolds
BOCES of Nassau County
Division of Occupational Education
Salisbury Center
Westbury, New York

Al Burkhardt, Special Needs Coordinator
Brainerd Area Vocational Technical Institute
Brainerd, Minnesota

Owen Hill, Instructor
Technical Education Center
El Paso, Texas

George A. Glaeser, Project Director
Regional Plan for the Vocational Education of the
Handicapped of San Diego County
Department of Education, San Diego County
San Diego, California

C. Carlyle Norment, Director of Instruction
School of Technology
San Jose City College
San Jose, California

Dr. Lloyd W. Tindall, Project Associate
Wisconsin Vocational Studies Center
University of Wisconsin
Madison, Wisconsin

Helene Flolo
Vocational Nursing Instructor
West Valley Community College
San Jose, California

James Raybourn
Woodworking Instructor
Livermore High School
Livermore, California

Dr. Charles Kokaska
Department of Special Education
California State University, Long Beach
Long Beach, California

We included among these reviewers people who provided us with examples of ways to overcome barriers as well as members of various target audiences who had not previously been involved in preparation of the Guidebook.

The remarks made by the reviewers were the subject for discussion at the second Advisory Panel meeting held October 22, 1977. No serious technical problems were raised in the written reviews nor in the discussions at the panel meeting. Some reviewers did suggest that more information about individual planning be included. This was done in the final version. The major change suggested was in the organization of the chapters.

Figure 1 shows the draft and final tables of contents. To effect the change, we split draft Chapter 2--much the longest of the draft chapters--into two parts to become Chapters 4 and 5 in the revised version. This was easy to do as the draft chapter had two distinct "halves" corresponding to the two chapters it became in the final version. Additionally, we removed a few pages of introductory matter from Chapter 2, placing them in Chapter 1. We added Appendix C to support the augmented discussion of individual planning incorporated in revised Chapters 4 and 5.

The motivation for the reorganization came largely from the suggestion of some Advisory Panel members that it would be convenient to have separate sections directed at administrators, teachers, and placement personnel. This idea has obvious appeal, but it also has serious drawbacks. The appeal is that members of various target audiences would see "their own" section. The main drawbacks are (a) that concerns of the various parties overlap substantially--teachers and administrators both have to worry about student assessment and curriculum modification, for example; and (b) that once a topic finds its way into, say, the administrator's section, a teacher or placement officer may feel less inclined to consult it than otherwise would be the case.

We felt that the benefits of organization by target group could largely be obtained by a modest reordering of chapters. This reordering, which amounted to little more than switching the positions of draft Chapter 2 and 3--the former was split in two in the revised manuscript. Thus, the chapters that Advisory Panel members felt had the most to do with administrators, revised Chapters 2, 3, and 4 came first; followed by two chapters on topics of primary concern to teachers; and, finally, the chapter of concern to placement staff.

Figure 1

CONTENT REARRANGEMENT FOLLOWING REVIEW

Original Table of Contents		Revised Table of Contents	
Chapter 1.	Entering the Mainstream: How and Why	Chapter 1.	Entering the Mainstream: How and Why
Chapter 2.	Enhancing Staff Skills	Chapter 2.	Developing Positive Staff and Student Attitudes Towards Mainstreaming
Chapter 3.	Developing Positive Staff and Student Attitudes Towards Mainstreaming	Chapter 3.	Eliminating Architectural Barriers
Chapter 4.	Eliminating Architectural Barriers	Chapter 4.	Assessing the Individual Handicapped Student
Chapter 5.	Eliminating Equipment and Work Environment Barriers	Chapter 5.	Modifying the Curriculum
Chapter 6.	Placing Handicapped Students in Jobs	Chapter 6.	Eliminating Equipment and Work Environment Barriers
		Chapter 7.	Placing Handicapped Students in Jobs
		Chapter 8.	Full Circle
Appendix A.	Handicapping Conditions	Appendix A.	Handicapping Conditions
Appendix B.	Agencies and Organizations Serving the Handicapped	Appendix B.	Agencies and Organizations Serving the Handicapped
		Appendix C.	A Suggested Guidelines Model for LEA/RLA Use Both in Developing and in Reviewing Individualized Educational Programming as a Process

Upon reviewing the revised draft, the publisher suggested that we add a summary chapter and add some statistics to Chapter 1 on the number of handicapped people in the United States. These were the last changes before the finished manuscript went to the typesetter; the former is reflected in Figure 1.

V. DISSEMINATION: COMMERCIAL PUBLICATION OF THE GUIDEBOOK

One of the more frustrating aspects of educational research and development is the "dissemination problem." Often, products are developed that are too little used because there is no efficient way to get them into the hands of those who need them. From the start, we took steps to avoid this problem.

SELECTION OF THE FORM OF DISSEMINATION

At the time the proposal for the project was written, we decided to seek a commercial publisher for the Guidebook. Our decision to seek commercial publication as against alternate approaches such as ERIC, the Government Printing Office, or publication by AIR, was motivated by the fact that commercial publishers enjoy certain capabilities in greater measure than some or all of the other outlets listed above.

- Commercial publishers have established sales networks for marketing the product to the most likely users.
- Commercial publishers are able to put a large number of books on the market quickly.
- Commercial publishers are able to produce a product of high technical quality--typeset text, good halftones, professional-quality drawings, attractive and durable bindings--resulting in a product that is at once more durable, useful, and appealing than a product lacking any of these characteristics.

None of ERIC, AIR, and GOP have sales networks, although all make an effort to advise the public about available titles. AIR and ERIC are not geared for large print runs, although this is clearly within GPO's capability. Finally, while GPO and AIR are capable of producing products of high technical quality--GPO using its own facilities, AIR by contracting--the extra project cost would be high in either case as typesetting and preparation of halftones and artwork would have to be paid out of project funds, whereas a commercial publisher would bear these costs.

In sum, the most effective way to secure widespread dissemination of the Guidebook appeared to be through commercial publication. Therefore, the search for a publisher was made an integral part of the project.

STEPS IN SECURING COMMERCIAL PUBLICATION

Two interrelated sets of considerations must be attended to in securing publication of a product such as the Guidebook. One set arises from the necessity of making satisfactory contractual arrangements with a publisher. The other set arises from USOE procedures for securing permission to obtain copyright and to select a publisher. Figure 2 shows the steps taken relative to each set of considerations. We will discuss these steps briefly.

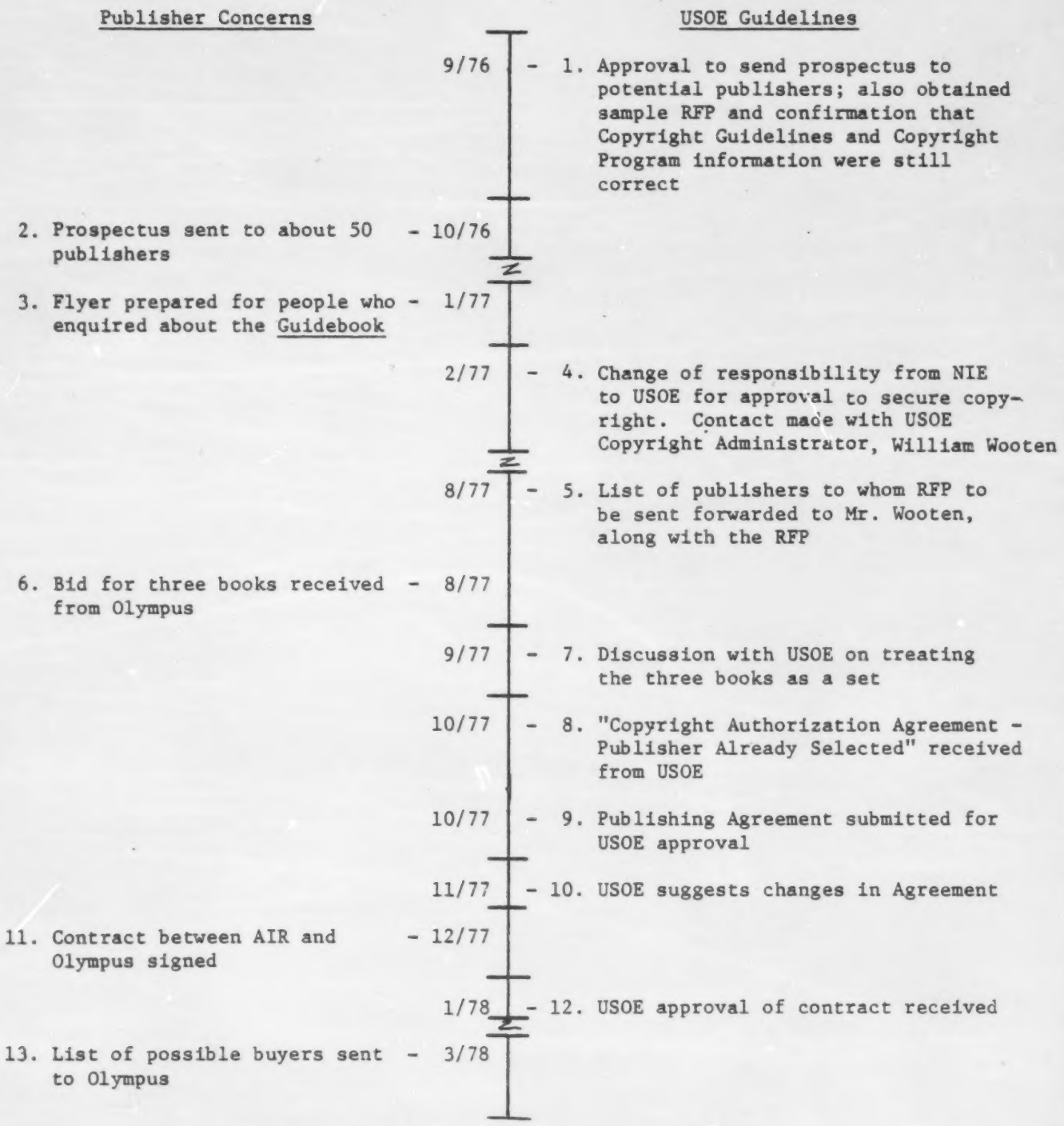
Steps 1 and 2: Early Publisher Contacts. Both common sense and recent research (Crawford, Kratochvil, and Wright, 1972) suggest that successful publication is more likely if publishers are alerted to the imminent availability of a manuscript, and invited to make suggestions as to content and format in time for these suggestions to be incorporated. Accordingly, we wished to prepare a prospectus describing the Guidebook to send to likely publishers. Therefore, in September, 1976, we requested approval of the NIE Copyright Administrator to send a prospectus to selected publishers. His permission secured, we distributed the prospectus to 48 publishers in October of that year. (See Appendix H for a copy of the prospectus and a list of publishers.) The prospectus specified the intended audience, the style and format intended for the Guidebook, and the proposed contents.

Steps 3 and 13: Notifying Possible Users. Shortly after the project began in August, 1976, we began to receive requests for information from potential users about when the Guidebook would be available and what it would be like. To answer these inquiries, we prepared a one-page flyer based on the information in the prospectus (Appendix I). Since we were still in the early stages of Guidebook writing, we invited those who wrote to us for information to send examples of successful practices for possible inclusion. We regarded this as important to the effort to secure a publisher as it gave us evidence we could present that there was interest in the field. We maintained a file of persons who requested information and included their names on a list of possible Guidebook purchasers we sent to the publisher much later, after the contract was signed.

Steps 4 and 5: USOE Approval for Competitive Bid Procedures. In February, 1977, we learned that responsibility for administering the copyright program as it applied to products developed under USOE sponsorship had been transferred

Figure 2

STEPS TO ACHIEVE PUBLICATION


Publisher Concerns
USOE Guidelines
9/76 - 1. Approval to send prospectus to potential publishers; also obtained sample RFP and confirmation that Copyright Guidelines and Copyright Program information were still correct
2. Prospectus sent to about 50 publishers - 10/76
3. Flyer prepared for people who enquired about the Guidebook - 1/77
2/77 - 4. Change of responsibility from NIE to USOE for approval to secure copyright. Contact made with USOE Copyright Administrator, William Wooten
8/77 - 5. List of publishers to whom RFP to be sent forwarded to Mr. Wooten, along with the RFP
6. Bid for three books received from Olympus - 8/77
9/77 - 7. Discussion with USOE on treating the three books as a set
10/77 - 8. "Copyright Authorization Agreement - Publisher Already Selected" received from USOE
10/77 - 9. Publishing Agreement submitted for USOE approval
11/77 - 10. USOE suggests changes in Agreement
11. Contract between AIR and Olympus signed - 12/77
1/78 - 12. USOE approval of contract received
13. List of possible buyers sent to Olympus - 3/78

to USOE from NIE. We made contact with the USOE Copyright Administrator and, over the course of the next several months, prepared a list of potentially interested publishers along with a Request for Proposals to send to each of them along with the manuscript. The list of publishers was composed of those who had expressed an interest in the Guidebook in response to the prospectus. (See Appendix J for a list of the publishers and a copy of the Request for Proposals.) In doing this, we were following the procedures laid down in USOE's Copyright Program Information (1972) which specifies competitive procedures to be followed in the publication of products resulting from USOE sponsored research and development projects. The purpose of these procedures is to assure that dissemination is carried out in an equitable manner for developers, producers, and users.

Steps 6 - 12: Publisher Negotiations and Contract. Even as we awaited approval of the Request for Proposals and the list of publishers, we received a bid to publish the Guidebook from Olympus Publishing Company. This happened because Olympus wished to publish the Guidebook in a set with two other books that we had out for bid at the time.* Therefore, they included Guidebook publication in their reply to the Request for Proposals which had asked for bids only on the other two.

Upon receipt of the Olympus bid, we approached the Copyright Administrator concerning the possibility of naming Olympus as the Guidebook publisher, rather than putting the Guidebook up for bid. This strategy commended itself on the following grounds: (a) publication would be assured, whereas if we turned down the offer, the possibility, however slight, existed that no bids would be received; (b) marketing all three together would allow the publisher to present them as an attractive package, probably enhancing sales; and (c) publication of all three by the same house would emphasize the complementary nature of the books and avoid the appearance of competition among them.

In light of these advantages, the USOE agreed to authorize Olympus as the publisher, issuing a "Copyright Authorization Agreement (Publisher Already

*Vocational Opportunities and Training Programs and Placement Services produced under contract #300-75-0345 between AIR and the Bureau of Education for the Handicapped.

Selected) on October 10, 1977. A proposed contract between AIR and Olympus was then forwarded to the USOE Copyright Administrator whose suggestions for changes were incorporated into the final contract (Appendix K) signed on December 13, 1977, and approved by the Copyright Adminstrator in January, 1978.

VI. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

This project produced a Guidebook to help vocational educators serve handicapped students in regular vocational programs. The following topics were addressed in the book: establishing a positive attitude, eliminating architectural barriers, assessing the individual handicapped student, modifying the curriculum, eliminating equipment and work environment barriers, placing handicapped students in jobs, the nature of various handicapping conditions, agencies and organizations serving the handicapped, and guidelines for developing individualized educational programs for handicapped students. The Guidebook was developed with the assistance of vocational educators, special educators, and others concerned with vocational preparation of handicapped students, and published by Olympus Publishing Company of Salt Lake City, Utah.

As research for the book progressed, it became apparent that a wide range of strategies could be used to teach handicapped students effectively in regular vocational programs and to get them placed on the job. Vocational educators we encountered who had included handicapped students in their programs were, on the whole, favorable to the idea, provided that they were informed of the impending enrollment of a handicapped student in plenty of time to plan for any modifications in teaching techniques or equipment that might be needed. Often the modifications that had proven necessary were modest and could be accomplished fairly easily, particularly if individualized programs were already in place. These, of course, are impressions resulting, perhaps, from our focusong on successful solutions to problems, which were, after all, what we wanted to identify for inclusion in the Guidebook. Impressionistic though these observations may be, it seems clear to us that it is very often quite practical to include handicapped students in regular vocational programs and that vocational educators are able to work successfully with many handicapped students.

Still, the conclusion that handicapped students can often succeed in regular vocational programs and that vocational educators have available to them many strategies for contributing to success leaves open the

question of when placement in a regular program is the best placement for the student. Public Law 94-142 clearly specifies that a range of placements must be available to assure that a student is offered an appropriate educational setting. Clearly, too, the law specifies that a thorough pre-placement evaluation must be provided for the student to determine which kind of placement is, in fact, most appropriate. Detailed empirical information is, however, lacking on the characteristics of an optimal placement, although some progress has been made (e.g., Hughes, 1978a, 1978b). Serious work is needed to investigate the characteristics of successful and unsuccessful placements of handicapped students in vocational settings of various degrees of restrictiveness.

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APPENDIX A

PROJECT ABSTRACT

OVERCOMING BARRIERS TO MAINSTREAMING: A PROBLEM-SOLVING APPROACH

ABSTRACT

Problem:

Many barriers face the handicapped as they seek to prepare for and enter the world of work. Vocational educators, in their efforts to "mainstream" handicapped students are helping to remove and overcome many of these barriers. For vocational educators to be maximally effective in these efforts, they must be able to assess barriers at the local level and to take appropriate steps to overcome them. The proposed project will develop a guidebook for use by vocational administrators, teachers, counselors, and placement officers as they confront the problem of assessing and overcoming barriers to mainstreaming.

Objectives:

The specific objectives of the proposed project are:

- Assess the barriers to mainstreaming as seen by vocational education professionals and identify ways to prevent or overcome these barriers.
- Prepare a guidebook, acceptable to the vocational education community, that will assist vocational educators in identifying and overcoming local barriers to mainstreaming.
- Disseminate the guidebook widely in the vocational education community.
- Prepare the final report so that it constitutes a valuable guide to research and development planning.

Overview of the Proposed Method:

An advisory panel composed of practicing vocationational educators will identify the most significant barriers that they have faced in mainstreaming handicapped students. Based on this meeting and a review of relevant literature, a survey will be developed for distribution to a sample of vocational administrators, teachers, counselors and placement specialists to determine how they view the practical barriers to mainstreaming, and the procedures that they follow in overcoming them.

Based on this survey, a guidebook will be developed to assist firing line vocational educators wishing to improve their services to mainstreamed

handicapped students. The guidebook will discuss the assessment of local barriers and the selection of tools and procedures for overcoming them. The guidebook will be designed for ease of use and will approach barriers and the problems they present from the point of view of the practicing vocational educator. Ultimate dissemination of the guidebook will be actively pursued from the start of the project and every effort will be made to secure commercial publication. In addition, professional channels will be used.

Finally, the information collected in the survey will be thoroughly discussed in the final report. This discussion will center on areas of greatest need, as perceived by those surveyed and will be of value in research and development planning.

APPENDIX B

MEETING TOPICS

MEETING TOPICS

I. Common Barriers to Mainstreaming

Under this topic, we are concerned with identifying barriers to mainstreaming that are likely to be faced by the practicing vocational educator. We are primarily concerned with barriers that allow relatively short-range solution within the context of vocational education, or through the use of commonly available ancillary services. We anticipate that barriers will arise in some or all of the following areas:

- lack of special education skills among school staff; lack of awareness of what skills are needed;
- unnecessarily pessimistic or unreasonably optimistic attitudes on the part of staff;
- lack of special instructional aids or devices;
- architectural barriers impeding movement into and within buildings;
- equipment designs requiring modification before equipment can be used safely and properly by handicapped students;
- difficulties in placing students once they are trained.

In addition to identifying barriers, we wish to find out how the importance of barriers varies as a function of such factors as:

- type and severity of handicap,
- institutional setting (e.g., vocational center, comprehensive high school),
- vocational subject area.

II. Ways of Overcoming Barriers

Under this topic, we are concerned with ways in which vocational educators can assess the barriers they face and develop practical methods for overcoming them. We are particularly concerned with methods for overcoming barriers:

- that capitalize on existing competencies of vocational educators in such areas as individualizing instruction, task analysis, and matching student skills to employer needs, and in conducting in-service sessions to introduce new instructional techniques;

- that illustrate how equipment modifications, instructional materials development and other adaptations can be effected using skills available among vocational educators*;

- that show how the skills of teachers, counselors, administrators, and placement officers can be pooled to achieve effective ways to overcome barriers.

We anticipate getting some of this information from published sources, some from a survey to be conducted following our meeting, and some from panel members during our meeting. We also hope to visit some vocational programs in Northern California to view their efforts firsthand.

III. Programs to Survey and Most Effective Survey Format

Our concern here is to design survey instruments and to adopt a survey plan that will elicit one or two good examples of ways of overcoming barriers from each respondent. We need help in determining:

- whom we should survey;

- how we should phrase our questions to elicit detailed information about how barriers have been overcome; and

- how we should format the questionnaire for ease of use and to increase the likelihood of response.

In our survey, we wish to collect examples from about fifty programs, and to include all fields of vocational education, urban and rural areas, and each USOE Region.

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*For example, printing instructors might prepare enlarged worksheets for use by visually impaired students in all fields, while woodworking and metal-working instructors might help to build special guides for such students.

APPENDIX C

SYNOPSIS OF CURRENT INFORMATION

I. & II. BARRIERS AND WAYS TO OVERCOME THEM

We have a number of resources available that describe various handicapping conditions, the difficulties encountered by people with those conditions, and procedures and devices that can help alleviate those difficulties. The sources listed below are directly relevant to vocational education; each source touches upon the barriers mentioned in the list of meeting topics that you received earlier. We also hold other materials which, although not written for vocational educators, could have implications for their work.

What we most need to find out from you and the other panelists is how barriers are seen by those who must overcome them, which barriers are most significant, and what procedures are most practical for overcoming them in a vocational education setting. This information may come from personal experience or from resource materials. In particular we need information that is sufficiently detailed that another vocational educator could take that information and set up a similar training program to change attitudes or enhance skills, could make similar equipment or architectural modification, etc.

To recapitulate, for purposes of Guidebook preparation, we need to know:

- what barriers we should discuss;
- how such barriers can be overcome in mainstream vocational courses;
- where we should seek information about overcoming such barriers; and
- how we can present the information to make it most useful to practicing vocational educators.

Some key sources we now have available are:

- Weisgerber and others, Mainstreaming the Handicapped in Vocational Education, 1976.

This is a series of six modules designed for inservice training of vocational educators who will mainstream handicapped students. Topics include: Attitudes, the Visually Handicapped, the Orthopedically Handicapped, the Mentally Retarded, and the Communication Impaired. Each module discusses problems that may arise and ways of overcoming them.

- Johnson, Gordon. Interpretive Study: Mainstreaming Vocational Education for the Handicapped in California Secondary Schools, 1976.

  This report lists and briefly discusses some barriers to mainstreaming, and some techniques for including the handicapped in regular classes. Barriers include: Administrative Barriers--such as sparadic support, poor coordination; Financial Barriers; Curriculum/Staffing Barriers--such as lack of background in teaching the handicapped, inadequate counseling, and other support services; and Community Barriers. Techniques include: Staff Development; Schedule Modification; Curriculum Development or Modification--such as development or alteration of instructional materials, programs to orient students to new occupations; Equipment and Building Modifications; Supplemental Services--such as readers for the blind and improved counseling and tutoring.

- Center for Studies in Vocational and Technical Education, University of Wisconsin - Madison. It's About Time Visual Impairment Came Out in the Open, 1975.

  This is one of a series of booklets providing basic information about various handicaps. The booklet gives a very brief overview of problems that arise in teaching the blind, and techniques for overcoming them. Other booklets are on order.

- Vocational Training and Placement of the Severely Handicapped Project, American Institutes for Research.

  This project is designed to identify ways of overcoming barriers to identify ways of overcoming barriers to training and employment resulting from handicaps more severe than those a regular vocational educator would likely encounter in his classes. Many of the strategies identified may, however, be useful when adjusted for the less severely handicapped in regular vocational settings.

III. PROGRAMS TO SURVEY

The major purpose of the survey is to identify typical barriers to mainstreaming of the handicapped in regular vocational programs and to identfy ways and means of overcoming these barriers. These barriers and solutions for overcoming them will reflect:

- the perspectives of various vocational personnel--teachers, administrators, counselors, placement staff
- the various vocational program areas--agriculture, trades and industry, business and office occupations, technical education, etc.
- the various institutional settings--comprehensive high school, area vocational school, community college, etc.
- the types and severity of handicapping conditions

With this purpose in mind, the survey will ask respondents to supply the following major pieces of information:

- a description of the problem in functional terms--What is the problem? Who or what is the cause of the problem? Why and where does the problem exist? What are the factors that maintain the problem?
- a description of the solution in functional terms--Who solved the problem? How did they solve the problem? Why did they select that particular way to solve the problem? What resources assisted them in solving the problem?

The survey will attempt to elicit practical solutions to mainstreaming problems, that is, means and methods that have wide application rather than those that are esoteric or expensive and which, however successful in one particular setting, may require skills, equipment, or amounts of money not likely to be available in most vocational programs.

The following sources list potential survey respondents:

- National Association of Vocational Education Special Needs Personnel. 100 Successful Vocational Special Needs Programs, 1975.

  About half of these programs serve the handicapped.

- Johnson, Gordon F. Interpretive Study: Mainstreaming Vocational Education for the Handicapped in California Secondary Schools.

  Lists ten California LEAs that mainstream handicapped students.

We would like you to list additional programs from which we may gain specific information about how vocational educators have confronted and overcome barriers. We would also like your ideas on how we can approach survey respondents to gather information as described above. We would like to get one or two answers from each respondent that discusses specific problems and solutions in some detail; this differs from the typical survey in which broad information about an entire program is sought.

APPENDIX D

FORM TO LIST PROBLEM AREAS

AMERICAN INSTITUTES FOR RESEARCH
IN THE BEHAVIORAL SCIENCES
P.O. Box 1113, 1791 Arastradero Rd., Palo Alto, Ca. 94302 ● 415/493-3550

ADVISORY PANEL MEETING
MAINSTREAMING HANDICAPPED STUDENTS
October 21, 1976

For each of the following common barriers to mainstreaming, please briefly describe a real-world problem of which you are aware that reflects the barrier.

1. Lack of special education skills among school staff

2. Inappropriate attitudes on the part of staff

3. Lack of special instructional aids or devices

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4. Architectural barriers that impede movement

5. Lack of equipment with modifications for handicapped students

6. Placement difficulties after students are trained

APPENDIX E

FORM TO LIST RESOURCES

AMERICAN INSTITUTES FOR RESEARCH
IN THE BEHAVIORAL SCIENCES
P.O. Box 1113, 1791 Arastradero Rd., Palo Alto, Ca. 94302 • 415/493-3550

ADVISORY PANEL MEETING
MAINSTREAMING HANDICAPPED STUDENTS
October 21, 1976

For each of the following common barriers to mainstreaming, please identify both printed resources that provide assistance in overcoming barriers and actual educational programs that have solved problems of mainstreaming.

1. Lack of special education skills among school staff

   Printed Resources

   Educational Programs

2. Inappropriate attitudes on the part of staff

   Printed Resources

   Educational Programs

3. Lack of special instructional aids or devices

   Printed Resources

   Educational Programs

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4. Architectural barriers that impede movement

Printed Resources

Educational Programs

5. Lack of equipment with modifications for handicapped students

Printed Resources

Educational Programs

6. Placement difficulties after students are trained

Printed Resources

Educational Programs

APPENDIX F

SAMPLE COMPLETED SURVEY FORM

AMERICAN INSTITUTES FOR RESEARCH
IN THE BEHAVIORAL SCIENCES
P.O. Box 1113, 1791 Arastradero Rd., Palo Alto, Ca. 94302 ● 415/493-3550

MAINSTREAMING EXAMPLE REPORT FORM

AREA OF CONCERN IN THE EXAMPLE	*Modifying curriculum for handicapped students in a mainstream classroom.*
SPECIFIC CONCERN IN THE EXAMPLE	*Most jobs taught in the FOOD SERVICE PROGRAM, such as Pastry Chef, include tasks that may be beyond the reach of the mentally retarded.*
HANDICAPPING CONDITION(S) OF STUDENTS IN THE EXAMPLE	*Mildly Mentally Retarded*
VOCATIONAL SUBJECT MATTER AREA(S)	*Food Services Occupations*
PERSONS INVOLVED IN DEALING WITH THE CONCERN	What vocational staff? What special education staff? What persons from outside of the educational system (e.g., employers, union representatives, parents, rehabilitation specialists)? *Food service instructor, vice principal for instruction, counselor, and parents*

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WHAT EACH PERSON DID	What actions did each person take? How did each action help in dealing with the concern? How long did it take each person to do what he or she did? How would you do things differently if you could do them over? Why were things done the way they were?

The vice principal for instruction at the Regional Vocational Center encouraged faculty members to compile a master list of competencies needed in Food Services and 10 other Occupational Areas in which training is offered. These competencies were then grouped into those needed for entry into jobs in the community; each student in a class acquires the competencies needed for the job he or she plans to enter. One result of this procedure is that different students in a given class will be working only on those competencies appropriate to their educational goals--some competencies are common to many job goals, some are unique to a single job goal. This feature facilitates the inclusion of handicapped students (in this case a mildly retarded student) because students are typically engaged in a wide variety of activities and a student is not singled out as unusual if he or she is working on something different from what others are working on.

To accommodate the student in question, Food Services staff and a counselor at the center reviewed the records of the student and met with the student's parents to discuss appropriate goals, given the capabilities of the student. Food Services staff then selected those competencies from a master list that would qualify the student to work as a Preparation Cook (roughly equivalent to Cook Helper I 317.887 in the Dictionary of Occupational Titles). The student and the student's parents agreed with this goal, and the student was enrolled in the regular program.

The standards set for the retarded student on those competencies the student was to gain were the same as for any other student. The instructor was careful to arrange instruction to minimize the likelihood that the retarded student would experience failure in working toward those competencies. For example, when giving demonstrations the instructor proceeded at a pace appropriate to the retarded student's rate of learning. The instructor felt that this was not only worthwhile in helping the retarded student to grasp the steps involved, but also advantageous for the other students, allowing them time to think more carefully about what was going on than they might have if the demonstration were conducted more rapidly. Following this procedure does not require that the retarded student be singled out in any way and does not disrupt instruction of the other students. Another technique that the instructor followed was to assign students to work in teams. He always used this approach when a difficult activity was undertaken--by pairing the retarded student with another, the likelihood of failure was reduced and the retarded student was able to learn from the performance of the other student while experiencing success in having helped to produce a satisfactory end product. This had the additional benefit of helping the retarded and non-retarded students to learn to work together and to understand each other.

SETTING OF THE EXAMPLE	Where is the facility located? What kind of a facility is it (e.g., vocational center, comprehensive high school, special facility)? How large is the facility? Please describe your approach to instruction.

The San Jose Regional Vocational Center is one of six area vocational schools in California. It serves six school districts, has a capacity for 2,000 students, and offers 25 instructional programs. Its offerings are primarily two-year programs for 11th and 12th grades; there are some 1-year offerings for 12th grade only. The RVC also has an adult program in which evening classes are offered for working people who want to upgrade their skills. The center enrolls handicapped students in many of its programs; in addition to the retarded student in Food Services, there are, for example, deaf students in Machine Shop and Data Processing programs, and an emotionally disturbed youngster in Food Services.

Individualization of all programs is a major goal of the RVC administration. Because the center operates on an open entry/open exit basis, instructors have been asked to develop individualized materials for variable schedules. Inherent in the concept of individualization also is the provision for the varying needs and abilities of students, including the handicapped. In order to enhance the likelihood of a successful experience for all concerned, center policy calls for the identification of jobs in the community at which the student can be placed once the program is completed, the planning of a curriculum appropriate given the strengths and weaknesses of the student, provision of necessary support for the teacher, and counseling with parents to assure that the goals for the student are understood and agreed upon.

GENERAL PRINCIPLES ILLUSTRATED BY THE EXAMPLE	What general principle is involved in the example that could be used in serving persons with other handicapping conditions and/or in other vocational fields? What cautions should be exercised in using this principle?

This example shows how task analysis can be used to identify jobs that place task demands that are within the reach of persons with a particular handicap and provides a model whereby students can be integrated in the regular classroom. (The increasing specialization of work is an advantage in applying this principle, as a person needs to be proficient in fewer types of activities. This makes it easier to identify jobs for which a person's attributes make him or her a suitable candidate--this is especially important for the handicapped as the inability to perform one or two types of activities need not eliminate a person as a candidate for work as often happened in the past.)

This approach is valuable so long as it focuses on the capabilities of handicapped people and the tasks that a person with those capabilities can perform. Focusing on things that handicapped people cannot do would be a misuse of this approach which could serve to exclude handicapped students, rather than open opportunites. The emphasis should be on the question, "How can this student's capabilities be used to acquire vocational skills?" not on "What does this person's handicap prevent?"

THE IMPORTANCE OF THE SETTING IN MAKING USE OF THE PRINCIPLE(S)	To what extent is the setting crucial to the use of this principle? How could the principle be modified for application in less ideal settings? How could the principle be applied more thoroughly in more ideal settings?

While excellent facilities and administrative encouragement and support facilitate putting this principle into practice, the same principle could be employed in settings that are not so advantageous. If, for example, time is not available to conduct careful task analyses, the instructor can rely on his or her professional judgment to identify tasks that are within the student's capabilities. Similarly, some districts may be able to provide more help from special educators about how best to make use of a handicapped student's capabilities than other districts.

STUDENT OUTCOMES

What goals were set for the handicapped student (or students) in the example (e.g., skills to be mastered, concepts to be grasped, interpersonal relationships to be improved)? Were these goals reached? If not, why not? Did this lead to modifications of goals, teaching strategy, etc.? Did students do better than expected? In what way?

As described above, the student was to gain the competencies needed to work as a Cook Helper I (D.O.T. 317.887). This includes peeling, cutting, and seeding vegatables and fruits, cleaning, cutting and grinding meats, poultry and sea food, and similar activities as described in the DOT. The student is still enrolled, has made excellent progress to date and no substantial problems are foreseen. The outlook for job placement is good.

APPENDIX G

TELEPHONE GUIDE AND RECORDING FORM

TELEPHONE LOG INFORMATION

AIR Staff Member:____ Date:_____ Number/ Type of Call:_____ Duration of Call:___

Person called: Name_____

Title_____

Address_____

_____

How we got your name:_____

_____

_____

PROBLEM AREA:_____

STATEMENT OF THE PROBLEM:_____

_____

_____

_____

PERSONS PRIMARILY INVOLVED IN SOLVING THE PROBLEM (NAME/TITLE)

_____/_____

_____/_____

_____/_____

_____/_____

_____/_____

VOCATIONAL FIELD(S)_____

HANDICAPPING CONDITION(S)_____

NOTES

LEVEL OF CONFIDENTIALITY REQUIRED IN USING THE INFORMATION

___No restrictions--can use names, dates, locations, etc.

___Can use names of staff and state location, but must put in no personally identifying information about students.

___Can list location, but not names of staff or students

___Can indicate location only vaguely (e.g. rural northeast) and make no reference to names of staff

___Cannot indicate location and/or anything that might personally identify staff

_____

_____

PERSON PRIMARILY RESPONSIBLE FOR COMPLETING FORM:_____

OTHERS WHO WILL BE INVOLVED:_____/_____

_____/_____

ANTICIPATED DATE OF COMPLETION OF FORM:_____

G-1

PURPOSE OF CALL

- o We are writing a Guidebook to help vocational educators mainstream handicapped students and would like to use examples showing how vocational educators have overcome problems that arise in serving such students.
- o We would like to get one or two examples from you showing how you have overcome problems in serving handicapped students. We are concerned with the roles played by teachers, counselor's, administrators, and placement officers in overcoming problems associated with serving visually handicapped, hearing impaired, speech impaired, orthopedically handicapped and mildly retarded students.
- o We would like to get detailed information about how problems were solved in the following areas:

PROBLEM AREAS AND SOME EXAMPLES OF PROBLEMS AT THE LEVEL OF GENERALITY DESIRED

1. Lack of Needed Skills on the Part of Vocational Educators

-teacher does not know how to conduct lectures and demonstrations to make them as comprehensible as possible to deaf or hard of hearing students

-administrator does not know what resources are available in the community to help plan programs for the handicapped or to provide other support services

-placement counselor does not know how to evaluate a workplace to identify problems that might arise for the handicapped worker

2. Attitudinal Problems

-(the teacher) 'I don't like having to do a lot of extra work for a few handicapped students when I don't have enough time for what I am supposed to do now.'

-(the handicapped student) 'Even if I can learn these skills, nobody will hire me; I've been rejected lots of times before, so don't tell me it won't happen again.'

-(other students)'What are they doing here? I don't want to be in a class for dummies!'

3. Architectural Problems

-it is hard for handicapped students to use the building: doors are heavy and hard to open; restrooms are not equipped for wheelchairs; getting into the building or going from floor to floor requires the use of steps.

-standard fixtures (door handles, drinking fountains,light switches, storage areas) are hard to reach or difficult to operate for many handicapped students

4. Shop Equipment that is Not Suited to the Handicapped

-machine set up and safe operation depend on seeing dials, gauges, moving parts and the like; modifications must be made before blind or visually handicapped students can use the equipment

-controls are hard to reach for those in wheelchairs or with impaired movement

-work surfaces are too high or otherwise poorly placed or oriented for those in wheelchairs or with other impaired movements

5. Standard Teaching Materials are not Suited to the Handicapped

-slide/tape presentations upon which much of the individualized program are based are not suitable for those with visual or auditory impairments

-instructional materials, operating instructions, and printed specifications for shop activities are written at too high a level for mildly retarded students; visually impaired students cannot use these materials at all without special aids or assistants

6. Problems Associated with Job Placement

-handicapped students have difficulty getting to and from work

-fellow workers rebel at working with the handicapped

-worksite modifications are needed and there is no money to pay for them

LEVEL OF DETAIL REQUIRED IN ANSWERS

- o Enough so that a competent vocational educator could 'take it from there;' that is, could determine the extent to which the problem he is facing is similar to the one faced in the example, and adapt the solution offered in the example if the problem is sufficiently similar to his. For example... (USE THE SAMPLE AND ASSURE THE RESPONDENT THAT HE WILL BE GETTING THE SAMPLE IN THE MAIL)

APPENDIX H

PROSPECTUS AND LIST OF PUBLISHERS

AMERICAN INSTITUTES FOR RESEARCH
IN THE BEHAVIORAL SCIENCES
P.O. Box 1113, 1791 Arastradero Rd., Palo Alto, Ca. 94302 ● 415/493-3550

PROSPECTUS

MAINSTREAMING HANDICAPPED STUDENTS: A PRACTICAL GUIDE FOR VOCATIONAL EDUCATORS

This prospectus describes a Guidebook now being prepared by the American Institutes for Research. The Guidebook will be of practical use to vocational educators who increasingly face the challenge of including handicapped students in vocational programs and in helping these students achieve successful placement after training.

With the Vocational Education Amendments of 1968 providing a vehicle for the mainstreaming of the handicapped and the Education of All Handicapped Children Act of 1975 designating 1978 as the year when a state must provide appropriate education for all handicapped children, vocational educators must act. Recognizing their responsibility, educators will need to know what to do, what kinds of programs or services to offer, and how to go about offering them.

AUDIENCE

The Guidebook will address firing line vocational educators--those most directly responsible for identifying and overcoming barriers to mainstreaming. They include:

- vocational teachers
- vocational counselors
- vocational administrators
- placement personnel

PURPOSE AND APPROACH

The purpose of the Guidebook is to provide vocational educators with some of the tools they need to mainstream handicapped students effectively.

The approach assumes that vocational educators will increase their services to the handicapped if they have practical methods available for overcoming the genuine problems that mainstreaming presents. Specifically, the Guidebook will:

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- present typical barriers from the point of view of teachers, counselors, administrators, and placement personnel
- show how vocational educators can assess local barriers to mainstreaming and develop realistic plans for overcoming them
- provide practical examples describing how vocational educators have applied their skills in extending vocational services to the handicapped, and showing how these solutions can be adapted to other situations

Thus, to achieve its major purpose, the Guidebook will show specific techniques for assessing and overcoming barriers. It will provide examples that illustrate how vocational educators can pool their skills to achieve practical solutions to problems associated with mainstreaming.

FORM AND STYLE

To ensure appeal to all members of the large and diverse audience, the Guidebook will have the following characteristics of form and style:

- a traditional book form of approximately 200 pages in length
- a nontechnical, straightforward style, avoiding the use of jargon
- brief and concise sentences stated in the active voice
- a layout that allows easy access to specific items and topics (Use of devices such as frequent side headings, boxes, and indexes will be explored, and the most effective of these will be included in the final version. Besides making the Guidebook easy to use, such devices will impart the pleasing aesthetic effect associated with good graphic design.)
- illustrations that show equipment modifications, instructional procedures, and other matters pertaining directly to content (Artwork which is purely decorative will not be included; rather, page layout will be designed for aesthetic appeal.)

CONTENT

The content, as outlined below, will consist of two sections. The first will deal with services vocational educators provide to the handicapped, the skills they possess for extending those services, and the barriers that they face in doing so. The second section will describe methods that have been practiced successfully to overcome barriers, and will show, by example, how vocational educators can take advantage of their own skills to arrive at practical solutions to mainstreaming problems.

SECTION I: The Role of Vocational Educators in Serving the Handicapped

A. The Increasing Commitment of Vocational Educators to Serving the Handicapped

1. This subsection will discuss the general societal awakening to the fact that handicapped people have the willingness and capacity to make valuable contributions if given the chance.

2. It will then briefly recount a variety of efforts by Congress, the courts, architects, equipment designers, and others, with emphasis on advances that have significance for vocational education.

3. Finally, it will describe the role of vocational educators in making opportunities available to handicapped people. This discussion will provide an overview of current concerns among vocational educators, especially pointing out that mainstream vocational education is one of many opportunities to be opened to the handicapped and is in no sense a dumping ground or option of last resort. The emphasis will be on the opportunity for vocational educators to make another valuable contribution to all of the individuals who make up society.

B. Mainstreaming Barriers and the Challenge to Vocational Educators

1. Nothwithstanding their traditional willingness to meet the needs of all groups, vocational educators will face many barriers in mainstreaming. As viewed by vocational professionals, these barriers evoke the following questions:

a. Will new skills be needed by the school staff? If so, what skills and how can they be gained?

b. Will there be attitudinal problems among the other students? Among some staff members? If so, how can these problems be overcome?

c. Will architectural modifications need to be made? If so, what, and how expensive will they be?

d. Will equipment modifications be needed? If so, what, and how can they be accomplished?

e. Will new teaching materials be needed? If so, what, and how can they be obtained?

f. Can handicapped graduates be placed? What special problems arise in doing so, and how can these problems be overcome?

2. Under consideration next for each of the major groups of vocational educators will be the skills that these educators now possess and which can be directly applied in overcoming barriers to mainstreaming. Such skills include task analysis, individualizing instruction, developing teaching materials, solving problems in building design, introducing new teaching techniques, and matching employer needs with student capabilities.

SECTION II: Identifying and Overcoming Barriers

This section, the greater part of the Guidebook, will provide practical examples showing how vocational educators have overcome barriers to mainstreaming. Examples of barriers and means of overcoming them will be gathered from a survey of vocational educators, from published sources, and from an advisory panel. The advisory panel will also assist in developing the format for presenting the examples. For each example presented, the Guidebook will:

- show how each type of vocational educator (i.e., teachers, counselors, administrators, and placement personnel) viewed the barrier
- show how vocational educators analyzed the barrier and devised, and effected, a practical solution
- point out the principles educators applied in overcoming the barrier and how others might apply them in overcoming other similar barriers

The Guidebook will provide examples of barriers which a variety of vocational education professionals can conveniently view from their own unique perspectives. It will highlight methods of overcoming barriers that have wide application rather than esoteric, expensive methods which, however successful, may require skills, equipment, or amounts of money not likely to be available in most vocational programs. Moreover, the examples selected will represent a wide variety of vocational fields.

FOR FURTHER INFORMATION

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American Institutes for Research
P.O. Box 1113
Palo Alto, California 94302
(415)493-3550

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APPENDIX I

FLYER DESCRIBING THE GUIDEBOOK

AMERICAN INSTITUTES FOR RESEARCH
IN THE BEHAVIORAL SCIENCES
P.O. Box 1113, 1791 Arastradero Rd., Palo Alto, Ca. 94302 ● 415/493-3550

MAINSTREAMING HANDICAPPED STUDENTS:
A PRACTICAL GUIDE FOR VOCATIONAL EDUCATORS

AUDIENCE This flyer describes a Guidebook now being prepared by the American Institutes for Research that will address firing line vocational educators--those most directly responsible for identifying and overcoming barriers to mainstreaming.

PURPOSE AND APPROACH The purpose of the Guidebook is to provide vocational educators with some of the tools they need to mainstream handicapped students effectively.

The approach assumes that vocational educators will increase their services to the handicapped if they have practical methods available for overcoming the genuine problems that mainstreaming presents. Specifically, the Guidebook will:

- present typical barriers from the point of view of teachers, counselors, administrators, and placement personnel
- show how vocational educators can assess local barriers to mainstreaming and develop realistic plans for overcoming them
- provide practical examples describing how vocational educators have applied their skills in extending vocational services to the handicapped, and showing how these solutions can be adapted to other situations

Thus, to achieve its major purpose, the Guidebook will show specific techniques for assessing and overcoming barriers. It will provide examples that illustrate how vocational educators can pool their skills to achieve practical solutions to problems associated with mainstreaming.

AVAILABILITY The Guidebook is now being drafted and is scheduled for completion during the summer of 1977. In order to assure the widest possible dissemination, a commercial publisher will be sought at that time.

Thank you for your interest in our project.

Peter R. Dahl
Project Director

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An Equal Opportunity Employer

APPENDIX J

LIST OF INTERESTED PUBLISHERS AND REQUEST FOR PROPOSALS

McGraw-Hill Book Company

American Technical Society

Robert J. Brady Company

Charles C. Thomas, Publisher

McKnight Publishing Company

Charles E. Merrill Publishing Company

Allyn and Bacon, Inc.

Olympus Press

REQUEST FOR PROPOSALS (RFP)

for the publication and distribution of the Mainstreaming Guidebook for Vocational Educators* (hereinafter called the Guidebook) developed as part of the project, "Overcoming Barriers to Mainstreaming: A Problem-Solving Approach."

INTRODUCTION

The American Institutes for Research of Palo Alto, California, solicits proposals from publishers of educational materials for the world-wide publication and distribution of the Guidebook which was developed under a grant from the Bureau of Occupational and Adult Education (BOAE) of the U.S. Office of Education (USOE), Department of Health, Education, and Welfare.

Under the Copyright Program of the USOE, as set forth in its Guidelines dated May 9, 1970, this institution has been authorized to select a publisher, and enter into an agreement with that publisher, for the publication and distribution of this Guidebook, under copyright, on an exclusive basis, for a period of five years, provided that all of the requirements of the Copyright Guidelines are met. The principal requirement is for the selection of a publisher on a competitive basis.

DESCRIPTION OF MATERIALS

The Guidebook is designed to provide vocational educators with practical information they can use to serve handicapped students more effectively in mainstream programs.

An introductory section provides a context for the core chapters by (a) discussing how the efforts of vocational educators meld with the nationwide effort to ensure the civil rights of handicapped persons in all aspects of society, and (b) showing the genuine potential for success enjoyed by handicapped persons.

Core chapters designed to provide practical, immediately useful information are:

- Enhancing Staff Skills
- Developing Positive Staff and Student Attitudes
- Eliminating Architectural Barriers
- Eliminating Equipment and Work Environment Barriers
- Placing Handicapped Students in Jobs

Illustrations and photographs highlight key points in these chapters.

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*This title was used during drafting. The publisher is free to use an alternate title, subject to AIR approval.

The last section defines various handicapping conditions, concentrating on information of use and interest to vocational educators.

HISTORY OF DEVELOPMENT

In August, 1976, BOAE awarded a grant to the American Institutes for Research to develop the attached Guidebook (Grant No. G007604705). Following grant award, AIR convened an advisory panel of vocational and special educators to suggest the contents to be included and the approach to be taken.

Following this meeting, project staff collected information from printed sources and from vocational educators directly (either by personal interviews or by mailed surveys) for use in preparing the Guidebook.

The draft Guidebook was reviewed by vocational and special educators whose criticisms were used in revising the manuscript for submission with this RFP.

PUBLICATION GOALS

The selected publisher will:

1. Produce the Guidebook, including editing, and provide illustrations and other artwork beyond that included with this draft. (AIR will provide photographs of all pictures and india-ink originals of all drawings to the publisher.)

2. Deliver twenty-five (25) copies of the published Guidebook to the government without charge. AIR will specify the office to which delivery should be made.

3. Print, manufacture, stock, catalog, advertise, promote, and sell the Guidebook.

USOE REQUIREMENTS

The selected publisher must:

1. Agree to mark each piece of the material with a legend, to be specified by the USOE, which will state the date when the materials will go into the public domain; state that the materials were developed under a grant with the USOE, but disclaim any official endorsement of the materials by the USOE.

2. Agree to copyright the materials in the name of the American Institutes for Research and to register the copyright in the U.S. Copyright Office within six months after the date of publication.

3. Agree to recognize the free right of the Government to use the materials for U.S. Government purposes.

4. Agree to permit the USOE to make periodic audits of its books of accounts relating to sales and royalties of the materials. However, the USOE would not normally expect to exercise that right.

5. Agree to the right of the USOE to require termination of the agreement in the event of noncompliance by the publisher with the publication agreement. However, a review procedure is provided for the protection of the publisher and American Institutes for Research.

6. Agree not to publish a revision or adaptation during the last year of the period of exclusive publication rights. Any revision or adaptation published during the first four years will be subject to the same terms and conditions as the original materials.

GENERAL REQUIREMENTS

1. The publisher will be required to pay royalties in accordance with the schedule set forth in its proposal and to provide semiannual statements of sales and royalties. It will be required to remit royalties on a semiannual basis.

2. Appropriate termination provisions will be required.

3. Arrangements for handling infringements will be required.

4. Arrangements for handling disputes will be required.

5. The publisher will permit American Institutes for Research, as well as the USOE, to audit its books of accounts relative to sales of these materials.

6. The contractor will warrant the materials published but only to the extent of any royalties which might be due or accrue after a notice of infringement or violation of other right is received.

CRITERIA FOR PUBLISHER SELECTION

1. The demonstrated capability of the publisher to accomplish an effective publication job, including its experience and reputation for excellence.

2. The manner in which these materials will complement the publishers' portfolio of products.

3. The caliber of the staff to be assigned to the publication effort.

4. The amount of money the publisher is willing to commit to the publication effort.

5. The proposed Guidebook format.

6. The time frame for accomplishing publication.

7. The promotion and sales plan submitted by the publisher.

8. The proposed royalty schedule.

SUBMISSION OF PROPOSALS

All proposals are to be submitted in duplicate and sent soon enough to be received within 60 days after the date of the cover letter accompanying this RFP. Proposals are to be sent to:

Dr. Peter R. Dahl
Project Director
American Institutes for Research
P.O. Box 1113
Palo Alto, CA 94302

(415)493-3550

It is expected that a publisher selection will be made within 30 days after the deadline for the receipt of proposals.

APPENDIX K

PUBLICATION CONTRACT

OLYMPUS PUBLISHING COMPANY

MEMORANDUM OF AGREEMENT

THIS AGREEMENT is made as of the 12th day of December, 1977, by and between American Institutes for Research in the Behavioral Sciences (hereinafter called the AUTHOR) and Olympus Publishing Company, located at Salt Lake City, Salt Lake County, Utah (hereinafter called the PUBLISHER), to publish and market a book now entitled Mainstreaming Guidebook for Vocational Educators (hereinafter called the WORK).

In consideration of the mutual promises and agreements of the parties hereto as hereinafter set forth, it is agreed as follows:

Author's Grant

1. The AUTHOR hereby grants, assigns, and transfers to the PUBLISHER the exclusive right to publish and manufacture the WORK and all rights to said WORK, including but without limitation all common law rights, copyrights, and the right to secure copyright and renewals thereof in the United States and all other countries of the world, in the name of the AUTHOR, together with the exclusive right to sell said WORK during the term or terms of such copyrights and the renewals thereof in all languages throughout the world (unless otherwise specifically provided in Section 16 of this Agreement).

Author's Warranty

2. The AUTHOR hereby warrants that he is the sole author and proprietor of the WORK and has the sole and exclusive right to sell it; that the work has not been published; that said WORK does not infringe any copyright, nor violate any proprietary rights, nor contain any scandalous or libelous matter, nor invade the privacy of any person; and that no right in said WORK has in any way been sold, mortgaged, or otherwise disposed of, and that said WORK is free from all liens and claims. The foregoing warranties apply only to the WORK submitted and revised by the AUTHOR and not to any revision made by the PUBLISHER or its assignees.

Indemnification

The AUTHOR agrees to defend, indemnify, and to hold harmless the PUBLISHER against all claims, demands, suits, losses, damages, costs, and expenses that the PUBLISHER may sustain or incur by reason of any scandalous or libelous matter contained or alleged to be contained in said WORK, or by reason of any invasion of the privacy of any person contained or alleged to be contained in said WORK, or by reason of any infringement or violation by said WORK of any copyright or proprietary right.

Agreement to Publish

3. The PUBLISHER agrees to publish the said WORK at its own expense (unless otherwise specifically provided in Section 16 of this

Agreement) within three months of receipt of and agreement of all changes and corrections to be made in the manuscript in such form as it deems most suitable.

Promotion of Work

4. The PUBLISHER shall advertise or otherwise promote the WORK through direct mailing to at least 50,000 potentially interested parties, by space advertising in at least four appropriate journals, display it at at least one convention during the first year, and in other ways as it may deem appropriate, and shall defray all costs of advertising or other promotion. The PUBLISHER shall establish the list price from time to time as it sees fit, and may allow on any sale or purchase such discount as it deems advisable.

Delivery of Manuscript

5. The AUTHOR agrees to deliver the complete manuscript, together with illustrations, maps, charts, drawings, or other material (except index) to be included in the WORK, not later than February 1, 1978. If the AUTHOR shall fail to make delivery by that date, the PUBLISHER shall be released from all obligations under this Agreement unless it has advised the AUTHOR in writing of its willingness to postpone the delivery date; but the AUTHOR shall not be free to cause or permit publication of said WORK elsewhere before he has reoffered it to the PUBLISHER under the terms of this Agreement.

Form of Manuscript

6. The AUTHOR agrees to present a clean, legibly typed (double-spaced) manuscript and illustrations, charts, etc., suitable for reproduction. Unless a special request concerning spelling, capitalization, punctuation, and typographic style has been made by the AUTHOR, and approved by the PUBLISHER, and unless a manuscript consistently following such style has been supplied, the PUBLISHER is authorized to make the manuscript conform to the style which it believes to be most suitable for the WORK, provided, however, that the PUBLISHER shall not be free, in the process of editing, to make substantive changes in the manuscript without the express approval of the AUTHOR.

Return of Proofs

The AUTHOR agrees that all proofs submitted by the PUBLISHER to him for proofreading and correction shall be promptly returned to the PRESS with all corrections to be made plainly and legibly indicated.

Index

The AUTHOR further agrees that, if said WORK is to include an index, he will prepare one, to be judged suitable and adequate by the PUBLISHER, within 2 weeks after page proofs have been submitted, or if he fails to do this, will compensate the PUBLISHER for the expense of preparing the index.

Permissions

The AUTHOR agrees to pay all permission fees (if any) for the use of text or illustrations controlled by others, and to supply the PUBLISHER with written evidence of the copyright owners' authorization to use the materials.

Author's Alterations

7. The cost of AUTHOR's alterations (i.e., changes from the original manuscript submitted by the AUTHOR, exclusive of the cost of correcting printer's errors) made by the AUTHOR after said WORK is in type shall be borne by the PUBLISHER to the extent of five percent (5%) of the cost of original composition, but beyond that amount shall be charged to the AUTHOR's account. The cost of AUTHOR's alterations in illustrations, exclusive of the cost of correction of printer's or platemaker's errors, shall be borne by the PUBLISHER to the extent of five percent (5%) of the cost of making the original plates, but beyond that shall be charged to the AUTHOR's account.

Protection of Work

8. The AUTHOR agrees that he will not, without the written consent of the PUBLISHER, publish during the existence of this Agreement any abridged or other version of said WORK or any book of a similar character tending to interfere with the sale of the WORK covered by this Agreement.

Insurance

9. The PUBLISHER shall not be the insurer of the manuscript of said WORK, or of the illustrations or other material used in connection with publication of said WORK; the PUBLISHER shall be liable only for gross or willful negligence in the care thereof.

Statements of Sales

10. Following publication of said WORK, the PUBLISHER agrees to submit to the AUTHOR, on or before the last day of August/February each year, statements of the number of copies of the WORK sold during the preceding January 1 to June 30 and July 1 to December 31.

Royalties

At the time of submitting such statements of sales, the PUBLISHER agrees to pay the AUTHOR, after deducting all expenses chargeable to him, all royalties as calculated hereinafter and accrued to the account of the AUTHOR on all copies of the WORK sold and subject to royalties during the preceding January 1 to June 30 and July 1 to December 31.

The amount of royalty shall be calculated as follows: On copies sold (except for those cases listed below) the following stipulated percentage: fifteen percent (15%) of the net receipts from all sales. (Nothing herein contained shall be construed as requiring the PUBLISHER

to print any given number of copies of the WORK, and the number to be printed and published shall be determined by the PUBLISHER in its sole discretion.)

Royalty-free Copies

No royalty shall be paid on any copies lost or destroyed, or on damaged or overstocked copies sold at or below manufacturing cost, or on copies given away for the purpose of aiding the sale of said WORK, or on copies given to the AUTHOR free of charge. No royalty shall be paid on copies of said WORK sold to the AUTHOR.

Other Rights

11. The AUTHOR grants and assigns to the PUBLISHER the full, sole, licensing of the following rights relating to the said WORK. If such rights are sold or licensed, the PUBLISHER shall pay to the AUTHOR, at the time of the next royalty payment after receipt of the funds, the following portion of the net amount actually received by the PUBLISHER for such sale or licensing: (a) In the case of translation, serial rights, selection, abridgment, condensation, digest, adaptation, syndication, omnibus volumes, receipts from a license to another publisher to reprint in whole or in part, or receipt from a license to a book club to manufacture its own edition for distribution to its members: fifty percent (50%). (b) In the case of dramatization, public reading, radio, television, and/or motion picture rights (sight and sound), or the right of reproduction by mechanical devices other than printing: fifty percent (50%).

The PUBLISHER may publish or permit others to publish, with or without compensation, such selections from said WORK as it may deem proper in the interest of the WORK.

Author's Copies

12. The PUBLISHER shall give the AUTHOR a total of ten (10) free copies of said WORK. For additional copies, intended for personal use only and not for resale, and upon which no royalty shall be paid, the AUTHOR shall pay or have charged to his account the list price less forty percent (40%) discount.

Termination of Agreement

13. If the PUBLISHER fails to keep said WORK in print and neglects to reprint it within one year of the AUTHOR's written request to that effect, then the AUTHOR may terminate this Agreement by written notice.

If, after three years following the date of publication of said WORK, the PUBLISHER shall advise the AUTHOR in writing that it wishes to discontinue publication, then upon such notice of termination the AUTHOR shall have the right at his option, within thirty (30) days of such notice, to purchase at actual manufacturing cost any copies and/or sheets of the WORK remaining with the PUBLISHER. If the AUTHOR shall fail to exercise this option within thirty (30) days of such notice,

then the PUBLISHER shall be free to destroy or otherwise dispose of any copies and/or sheets in any way it sees fit.

Notification

14. All notices which may be proper or necessary for the parties hereto to serve on each other may be served effectually in writing either by personal service or by mail addressed to the last-known post office address of either party.

Duration of Agreement

15. This Agreement shall be binding upon and inure to the benefit of the heirs, executors, administrators, and assigns of both parties, and shall continue for the duration of the original copyright of the WORK, of copyrights of all revisions and abridgments, and of all renewals thereof, subject, however, to provisions hereinabove set forth for possible earlier termination of the AGREEMENT.

Assignment of Agreement

This Agreement may be assigned by either party with, but only with, the written consent of the other, which consent must be obtained in advance, and the assignee thereof shall have all of the rights and remedies of the original parties insofar as the same are assignable. But this Agreement shall be assigned only as a whole and not as a part, and may not be assigned as to any part interest therein.

Special Provisions

16. The special provisions of this Agreement are:

The PUBLISHER agrees to:

1. Mark each piece of material with the following legends:

   "Copyright is claimed until 1983. Thereafter all portions of this work covered by this copyright will be in the public domain."

   "This work was developed under a grant from the U.S. Office of Education, Department of Health, Education, and Welfare. However, the content does not necessarily reflect the position or policy of that Agency, and no official endorsement of these materials should be inferred."

2. Copyright the materials in the name of the American Institutes for Research and to register the copyright in the U.S. Copyright Office within six months after the date of publication.

3. Recognize the free right of the Government to use the materials for U.S. Government purposes.

4. Permit the USOE to make periodic audits of its books of accounts relating to sales and royalties of the materials.

5. The right of the USOE to require termination of the agreement in the event of noncompliance by the publisher with the publication agreement. However, a review procedure is provided for the protection of the publisher and American Institutes for Research.

6. Not to publish a revision or adaptation during the last year of the period of exclusive publication rights. Any revision or adaptation published during the first four years will be subject to the same terms and conditions as the original materials.

7. Permit American Institutes for Research, as well as the USOE, to audit its books or accounts relative to sales of these materials.

8. Warrant the materials published, but only to the extent of any royalties which might be due or accrue after a notice of infringement or violation of other right is received.

9. Deliver twenty-five (25) copies of the published WORK to the government without charge. AIR will specify the office to which delivery should be made.

IN WITNESS WHEREOF, the parties hereto have caused this instrument to be executed since the day and year first hereinabove written.

William V. Clemans

Author (William V. Clemans, Vice President and Office Director for American Institutes for Research)

Publisher